

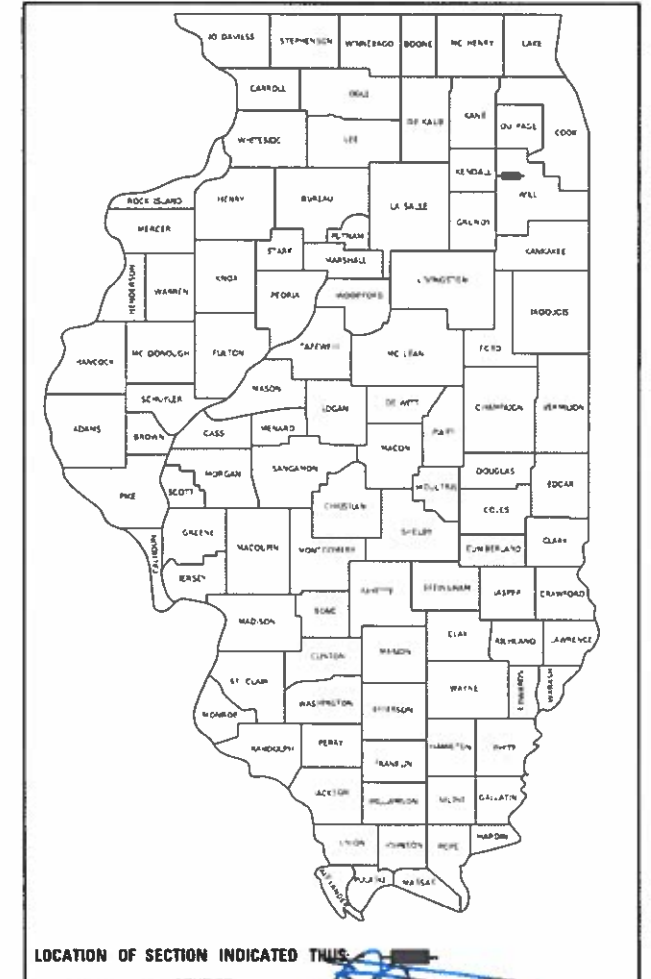
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL.	72	1
		ILLINOIS	CONTRACT NO. 61G36	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

F.A.U. 298 BLACK ROAD (C.H. 56)
IL RTE 59 (BROOK FOREST AVE) TO
U.S. RTE 30 (PLAINFIELD ROAD)/RAYNOR AVENUE
TRAFFIC SIGNAL MODERNIZATION AND
FIBER OPTIC COMMUNICATION SYSTEM
SECTION: 18-00517-00-TL
PROJECT NO.: 5XCE(712)
CITY OF JOLIET
WILL COUNTY
C-91-198-19



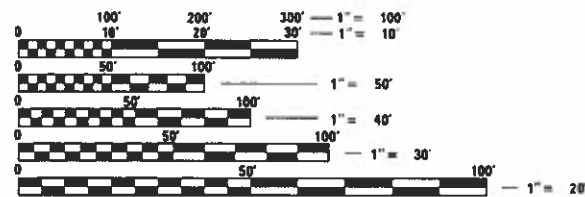
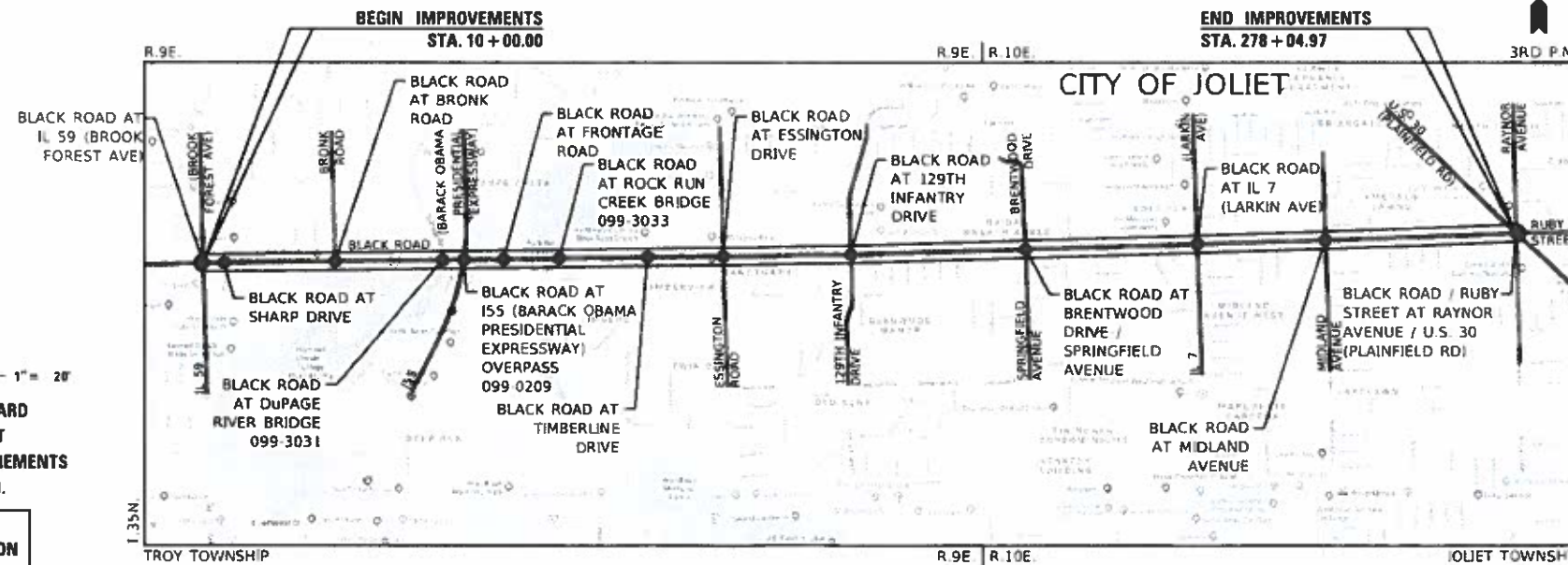
SIGNED: *[Signature]* DANIEL P. BRINKMAN, P.E.
DATE: Aug 20, 2020
ILLINOIS LICENSE NO.: 062-055293
EXPIRATION DATE: NOVEMBER 30, 2021

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED: August 18, 2020
[Signature]
CITY OF JOLIET, DIRECTOR OF PUBLIC WORKS

PASSED: Aug 27, 2020
[Signature]
DISTRICT ONE ENGINEER OF LOCAL ROADS AND STREETS

RELEASING FOR BID BASED ON LIMITED REVIEW: August 27, 2020
[Signature]
REGIONAL ENGINEER



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: ROSS J. HASEMAN, P.E.
PROJECT MANAGER: DANIEL P. BRINKMAN, P.E.

CONTRACT NO. 61G36

LOCATION MAP

GROSS AND NET LENGTH = 26,805.97 FT. = 5.077 MILE

GHA GEWALT HAMILTON ASSOCIATES, INC.
625 Forest Edge Drive • Vernon Hills, IL. 60061
Consulting Engineers & Surveyors

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

FEDERAL AID PROGRAM ENGINEER: CARMEN E. RAMOS, P.E. SCHAUMBURG, IL

SUMMARY OF QUANTITIES			LOCATION OF WORK		BLACK ROAD AT SHARP DRIVE	BLACK ROAD AT BRONK DRIVE	BLACK ROAD AT FRONTAGE ROAD	BLACK ROAD AT TIMBERLINE DRIVE	BLACK ROAD AT ESSINGTON ROAD	BLACK ROAD AT 129TH INFANTRY DRIVE	BLACK ROAD AT BRENTWOOD DRIVE / SPRINGFIELD AVENUE	BLACK ROAD AT IL 7 (LARKIN DRIVE)	BLACK ROAD AT MIDLAND AVENUE	BLACK ROAD / RUBY STREET AT U.S. 30 (PLAINFIELD RD) / RAYNOR AVENUE	INTERCONNECT - BLACK ROAD FROM IL 59 (BROOK FOREST AVE) TO U.S. 30 (PLAINFIELD RD) / RAYNOR AVENUE
			TYPE	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS
SP	CODE NO	ITEM	UNIT	TOTAL											
*	20200100	EARTH EXCAVATION	CU YD	5						5					
	21301072	EXPLORATION TRENCH 72" DEPTH	FOOT	100											100
*	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	340					165	175					
*	42400800	DETECTABLE WARNINGS	SQ FT	32					16	16					
*	44000600	SIDEWALK REMOVAL	SQ FT	315					165	150					
* Y	66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	22											22
* Y	66900530	SOIL DISPOSAL ANALYSIS	EACH	13											13
* Y	66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	LSUM	1											1
* Y	66901003	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	LSUM	1											1
* Y	66901006	REGULATED SUBSTANCES MONITORING	CAL DA	10											10
Y	67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	12											12
	67100100	MOBILIZATION	L SUM	1											1
	70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1											1
	70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1											1

* SPECIALTY ITEM * CONSTRUCTION CODE 0042

FILE NAME = 500.dgn
 5388.800
 Sheet 1

USER NAME = zwallsten
 PLOT SCALE = 1:40
 PLOT DATE = 9/16/2020

DESIGNED - DPB
 DRAWN - ZCW
 CHECKED - DPB
 DATE - 8/21/2020

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES
 BLACK ROAD INTERCONNECT

SCALE: None SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	3
ILLINOIS FED. AID PROJECT			CONTRACT NO. 61G36	

SUMMARY OF QUANTITIES			LOCATION OF WORK		BLACK ROAD AT SHARP DRIVE	BLACK ROAD AT BRONK DRIVE	BLACK ROAD AT FRONTAGE ROAD	BLACK ROAD AT TIMBERLINE DRIVE	BLACK ROAD AT ESSINGTON ROAD	BLACK ROAD AT 129TH INFANTRY DRIVE	BLACK ROAD AT BRENTWOOD DRIVE / SPRINGFIELD AVENUE	BLACK ROAD AT IL 7 (LARKIN DRIVE)	BLACK ROAD AT MIDLAND AVENUE	BLACK ROAD / RUBY STREET AT U.S. 30 (PLAINFIELD RD) / RAYNOR AVENUE	INTERCONNECT - BLACK ROAD FROM IL 59 (BROOK FOREST AVE) TO U.S. 30 (PLAINFIELD RD) / RAYNOR AVENUE
			TYPE	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS
SP	CODE NO	ITEM	UNIT	TOTAL											
	70102632	TRAFFIC CONTROL AND PROTECTION, STANDARD 701602	L SUM	1											1
	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1											1
	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1											1.00
	72400310	REMOVE SIGN PANEL - TYPE 1	SQ FT	131.25		20.25	13.5		30	37.5			30		
	72400320	REMOVE SIGN PANEL - TYPE 2	SQ FT	35							35				
*	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	335						335					
*	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	378					378						
	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	21,437											21,437
	81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	130				36	10		30		54		
	81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	164							164				
	81100600	CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT	522											522
	81300720	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 16" X 12" X 8"	EACH	6											6
Y	81400100	HANDHOLE	EACH	38											38
Y	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	12	1	1	1	1	1	1	1	1	1	1	2

* SPECIALTY ITEM * CONSTRUCTION CODE 0042

FILE NAME - SOQ.dgn	USER NAME - zwa@sten	DESIGNED - DPB	REVISED -
5388.800		DRAWN - ZCW	REVISED -
Sheet 2	PLOT SCALE - 1:20	CHECKED - DPB	REVISED -
	PLOT DATE - 9/15/2020	DATE - 8/21/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES
BLACK ROAD INTERCONNECT**

SCALE: None SHEET OF SHEETS STA. TO STA.

F.A.U. RTE. 298	SECTION 18-00517-00-TL	COUNTY WILL	TOTAL SHEETS 72	SHEET NO. 4
ILLINOIS FED. AID PROJECT			CONTRACT NO. 61G36	

SUMMARY OF QUANTITIES			LOCATION OF WORK		BLACK ROAD AT SHARP DRIVE	BLACK ROAD AT BRONK DRIVE	BLACK ROAD AT FRONTAGE ROAD	BLACK ROAD AT TIMBERLINE DRIVE	BLACK ROAD AT ESSINGTON ROAD	BLACK ROAD AT 129TH INFANTRY DRIVE	BLACK ROAD AT BRENTWOOD DRIVE / SPRINGFIELD AVENUE	BLACK ROAD AT IL 7 (LARKIN DRIVE)	BLACK ROAD AT MIDLAND AVENUE	BLACK ROAD / RUBY STREET AT U.S. 30 (PLAINFIELD RD) / RAYNOR AVENUE	INTERCONNECT - BLACK ROAD FROM IL 59 (BROOK FOREST AVE) TO U.S. 30 (PLAINFIELD RD) / RAYNOR AVENUE
			TYPE	UNIT	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS
SP	CODE NO	ITEM	UNIT	TOTAL											
	86400100	TRANSCEIVER - FIBER OPTIC	EACH	6											6
	87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	28,013											28,013
	87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	3,503				65	701	842	869		1,026		
	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1,372						724	648				
	87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	458							458				
	87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	156							156				
	87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	1							1				
	87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1							1				
	87900200	DRILL EXISTING HANDHOLE	EACH	31				2	2		5		4		18
	88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	14					4		3		7		
	88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	12					4		5		3		
	88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	6					4		1		1		
	88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	6					4		1		1		
	88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	34				6	4	8	8		8		

* SPECIALTY ITEM * CONSTRUCTION CODE 0042

FILE NAME - 500.dgn
 5388_800
 Sheet 3

USER NAME - zwa1sten
 DESIGNED - DPB
 DRAWN - ZCW
 CHECKED - DPB
 DATE - 8/21/2020
 PLOT SCALE - 1:20
 PLOT DATE - 9/15/2020

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES
 BLACK ROAD INTERCONNECT**

SCALE: None SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	5
ILLINOIS FED. AID PROJECT			CONTRACT NO. 61G36	

SUMMARY OF QUANTITIES			LOCATION OF WORK		BLACK ROAD AT SHARP DRIVE	BLACK ROAD AT BRONK DRIVE	BLACK ROAD AT FRONTAGE ROAD	BLACK ROAD AT TIMBERLINE DRIVE	BLACK ROAD AT ESSINGTON ROAD	BLACK ROAD AT 129TH INFANTRY DRIVE	BLACK ROAD AT BRENTWOOD DRIVE / SPRINGFIELD AVENUE	BLACK ROAD AT IL 7 (LARKIN DRIVE)	BLACK ROAD AT MIDLAND AVENUE	BLACK ROAD / RUBY STREET AT U.S. 30 (PLAINFIELD RD) / RAYNOR AVENUE	INTERCONNECT - BLACK ROAD FROM IL 59 (BROOK FOREST AVE) TO U.S. 30 (PLAINFIELD RD) / RAYNOR AVENUE
			TYPE	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS
SP	CODE NO	ITEM	UNIT	TOTAL											
	88200410	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	20						8			4		8
	88800100	PEDESTRIAN PUSH-BUTTON	EACH	34				6	4	8		8		8	
	89501410	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	2								1		1	
	89502200	MODIFY EXISTING CONTROLLER	EACH	3			1			1		1			
Y	89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	5			1		1						1
Y	89502215	MODIFY EXISTING CONTROLLER FOUNDATION	EACH	2								1		1	
Y	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	5					1.00	1.00		1.00		1.00	
Y	89502376	REBUILD EXISTING HANDHOLE	EACH	1						1					
Y	X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	800											800
Y	X0327698	LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	23			3		4		4		4		4
	X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	176						170			6		
Y	X1400081	FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	2								1		1	
Y	X1400367	PEDESTRIAN SIGNAL POST, 10 FT.	EACH	1								1			
Y	X1400378	PEDESTRIAN SIGNAL POST, 5 FT.	EACH	8					2	2				4	

* SPECIALTY ITEM * CONSTRUCTION CODE 0042

FILE NAME - 500.dgn 9388.800 Sheet 4	USER NAME - zwa1sten	DESIGNED - DPB DRAWN - ZCW CHECKED - DPB DATE - 8/21/2020	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES BLACK ROAD INTERCONNECT	F.A.U. RTE. 298	SECTION 18-00517-00-TL	COUNTY WILL	TOTAL SHEETS 72	SHEET NO. 6	CONTRACT NO. 61G36	ILLINOIS FED. AID PROJECT
SCALE: None	SHEET OF SHEETS	STA. TO STA.										

SUMMARY OF QUANTITIES			LOCATION OF WORK		BLACK ROAD AT SHARP DRIVE	BLACK ROAD AT BRONK DRIVE	BLACK ROAD AT FRONTAGE ROAD	BLACK ROAD AT TIMBERLINE DRIVE	BLACK ROAD AT ESSINGTON ROAD	BLACK ROAD AT 129TH INFANTRY DRIVE	BLACK ROAD AT BRENTWOOD DRIVE / SPRINGFIELD AVENUE	BLACK ROAD AT IL 7 (LARKIN DRIVE)	BLACK ROAD AT MIDLAND AVENUE	BLACK ROAD / RUBY STREET AT U.S. 30 (PLAINFIELD RD) / RAYNOR AVENUE	INTERCONNECT - BLACK ROAD FROM IL 59 (BROOK FOREST AVE) TO U.S. 30 (PLAINFIELD RD) / RAYNOR AVENUE
			TYPE	UNIT	TOTAL	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS	TRAFFIC SIGNALS
SP	CODE NO	ITEM	UNIT	TOTAL											
Y	X1400424	ELECTRIC CABLE IN CONDUIT, STREET NAME SIGN, NO. 14 3C, TYPE SOOW	FOOT	4,079		594	801		735	742	586		621		
* Y	X4400220	CURB REMOVAL AND REPLACEMENT	FOOT	34					17	17					
Y	X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1											1
Y	X7240500	RELOCATE EXISTING SIGNS	EACH	2							2				
Y	X7330064	SIGN SUPPORT SPECIAL	EACH	1		1									
Y	X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	5		1	1			1	1		1		
Y	X8710024	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	28,013											28,013
Y	X8780010	CONCRETE FOUNDATION, TYPE A 10-INCH DIAMETER	FOOT	36				8	8		4		16		
Y	Z0013798	CONSTRUCTION LAYOUT	L SUM	1											1
Y	Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	52											52
* Y	Z0076600	TRAINEES	HOOR	500											
* Y	Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOOR	500											

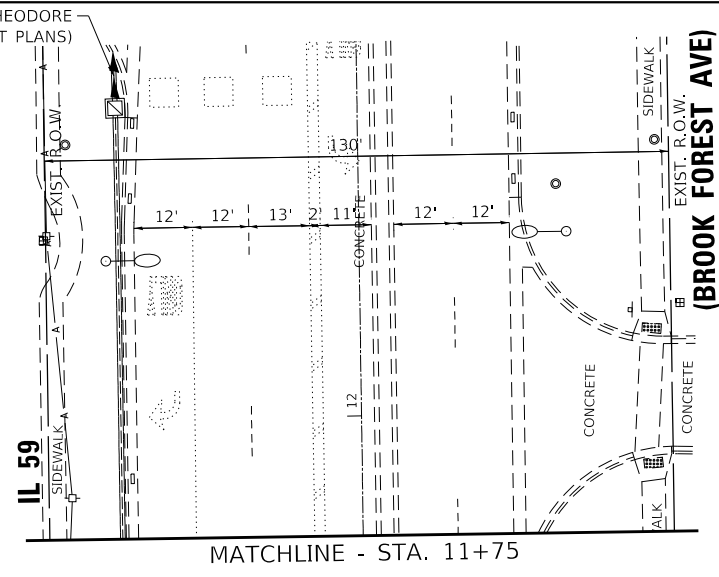
* SPECIALTY ITEM * CONSTRUCTION CODE 0042

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 7

FILE NAME = 500.dgn 5388.800 Sheet 5	USER NAME = zwa1sten	DESIGNED - DPB DRAWN - ZCW CHECKED - DPB DATE - 8/21/2020	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		SCHEDULE OF QUANTITIES BLACK ROAD INTERCONNECT				F.A.U. RTE. 298	SECTION 18-00517-00-TL	COUNTY WILL	TOTAL SHEETS 72	SHEET NO. 7	CONTRACT NO. 61G36	ILLINOIS FED. AID PROJECT
				SCALE: None	SHEET OF SHEETS	STA. TO STA.										



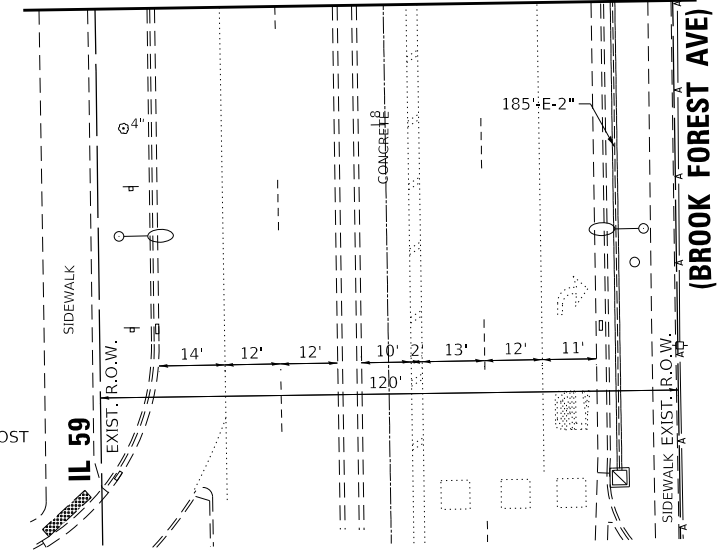
EXIST. INTERCONNECT TO THEODORE STREET (SEE INTERCONNECT PLANS)



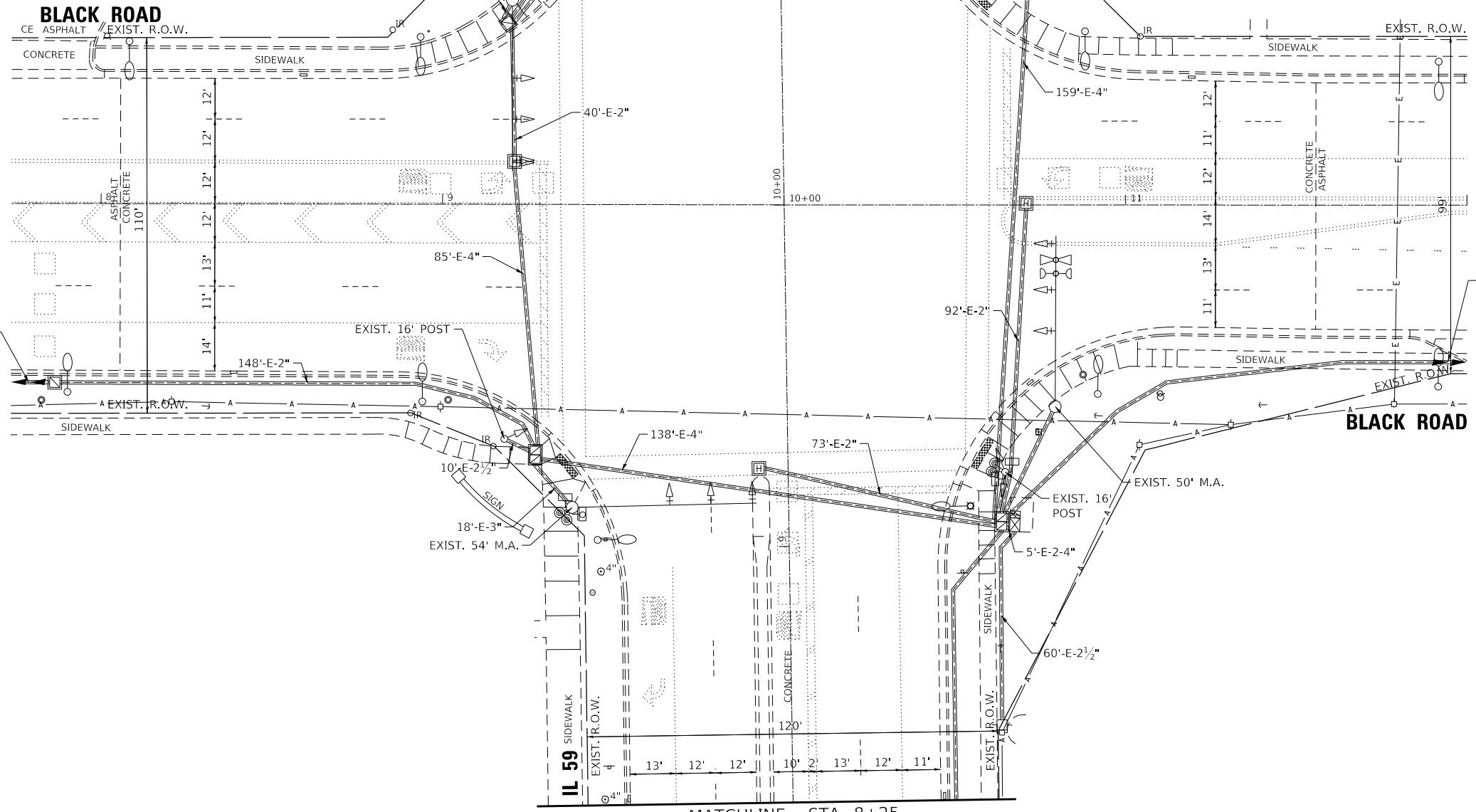
MATCHLINE - STA. 11+75

MATCHLINE - STA. 11+75

MATCHLINE - STA. 8+25



MATCHLINE - STA. 8+25



EXIST. INTERCONNECT TO HOME DEPOT ENTRANCE (SEE INTERCONNECT PLANS)

EXIST. INTERCONNECT TO SHARP DRIVE (SEE INTERCONNECT PLANS)

MATCHLINE - STA. 8+25

FOR INFORMATION ONLY

**IDOT ECON 142
TS 7590**

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 8

FILE NAME = Black @ IL 59 (Brook Forest Av) Perm: Signal.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
5388.800	PLOT SCALE = 1:40	DRAWN - ZCW	REVISED -
Default	PLOT DATE = 8/20/2020	CHECKED - DPB	REVISED -
		DATE - 8/21/2020	REVISED -

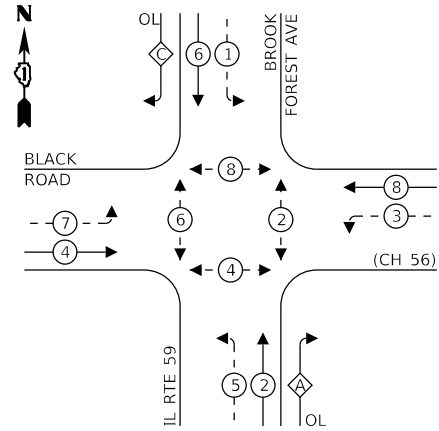
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODERNIZATION PLAN
BLACK ROAD AT IL 59 (BROOK FOREST AVE)**

SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	8
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				

EXISTING CONTROLLER SEQUENCE



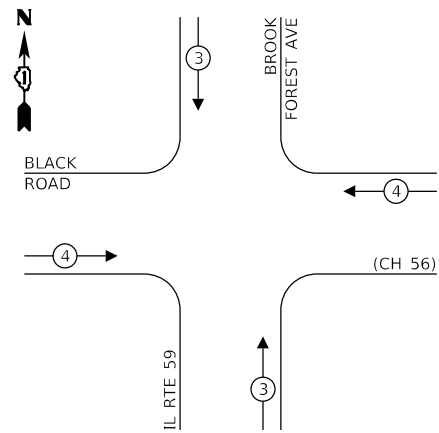
LEGEND:

- ← * → PROTECTED PHASE
- ← - * - → PROTECTED/PERMITTED PHASE
- ← * → PEDESTRIAN PHASE
- ← * OL → OVERLAP

RIGHT TURN OVERLAP PHASE DESIGNATION:

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	= 2 + 3	
C	= 6 + 7	

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	20	11	50	110
(YELLOW)	20	20	5	20
(GREEN)	20	12	45	108
PERMISSIVE ARROW	24	10	10	24
PED. SIGNAL	8	20	100	160
CONTROLLER	1	100	100	100
UPS	1	25	100	25
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	4	120	50	240
LUMINAIRE	-	250	50	-
TOTAL =				787

ENERGY COSTS TO:

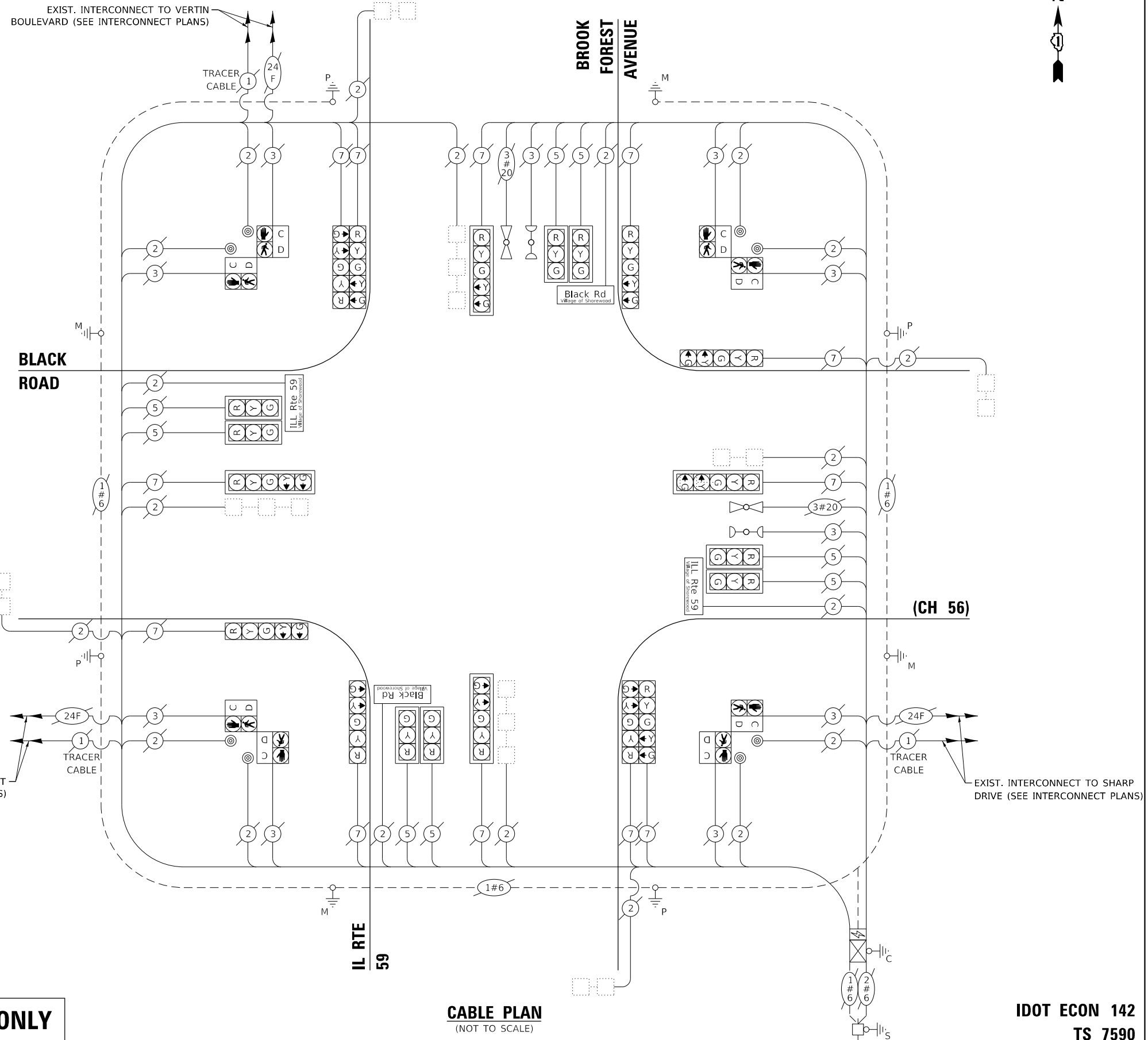
VILLAGE OF SHOREWOOD
ONE TOWNE CENTER BOULEVARD
SHOREWOOD, IL 60404

ENERGY SUPPLY: CONTACT: TIM COSLET
PHONE: (815) 724-5010
COMPANY: COM-ED
ACCOUNT NUMBER: -

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

FOR INFORMATION ONLY

DESIGNED -	DPB	REVISED -	
DRAWN -	ZCW	REVISED -	
CHECKED -	DPB	REVISED -	
DATE -	8/21/2020	REVISED -	



CABLE PLAN
(NOT TO SCALE)

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 9

FILE NAME =	USER NAME = zwallsten
Black @ IL 59 (Brook Forest Av) Perm Cable.dgn	
5388.800	PLOT SCALE = 1:40
Default	PLOT DATE = 8/20/2020

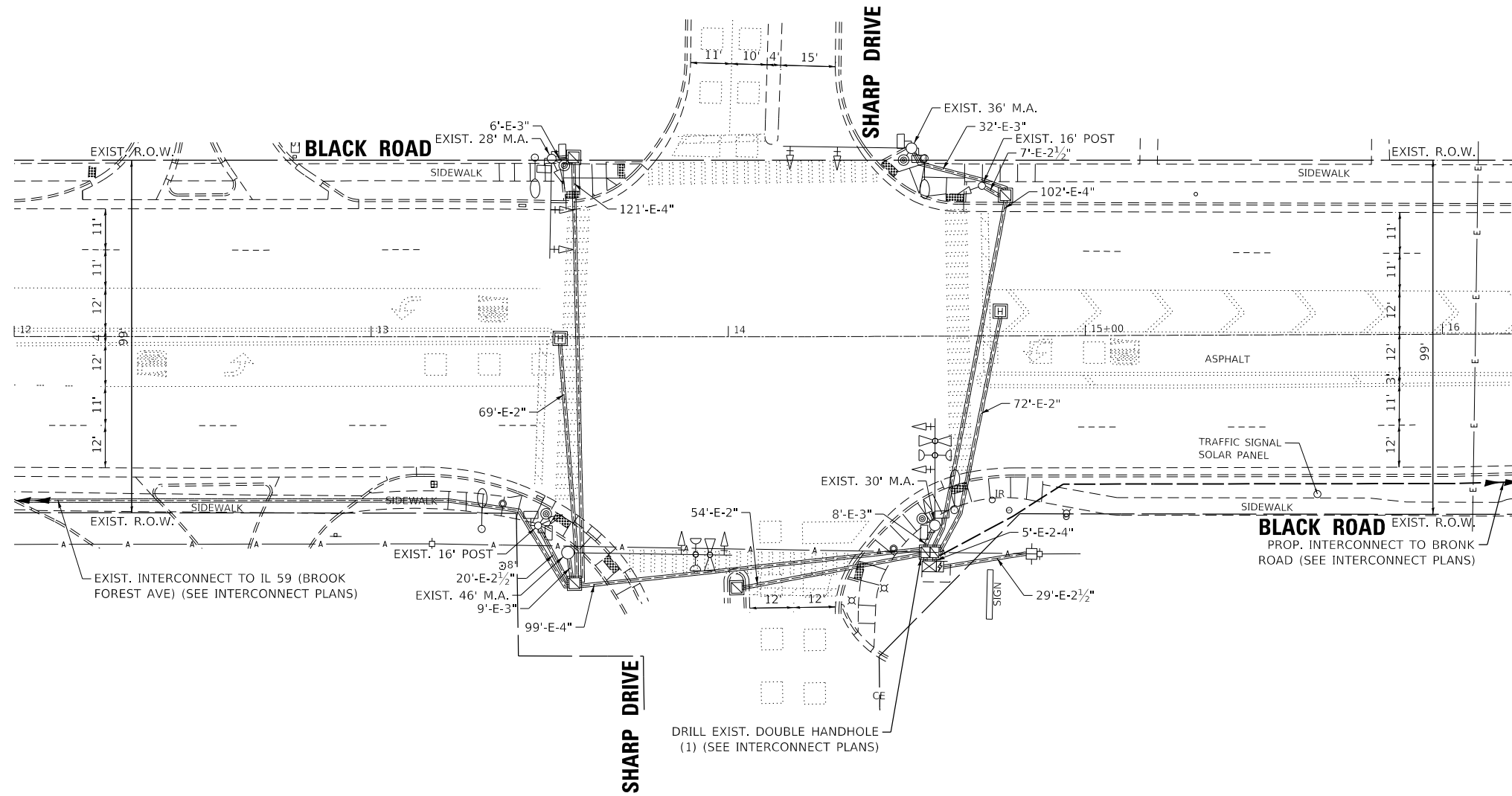
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CABLE PLAN, PHASE DESIGNATION DIAGRAM,
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
BLACK ROAD AT IL 59 (BROOK FOREST AVE)**

SCALE: None SHEET OF SHEETS STA. TO STA.

**IDOT ECON 142
TS 7590**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	9
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				



GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 10

IDOT ECON 142

FILE NAME =	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
Black @ Sharp Perm SignLdgn		DRAWN - ZCW	REVISED -
5388.800	PLOT SCALE = 1:40	CHECKED - DPB	REVISED -
Default	PLOT DATE = 8/20/2020	DATE - 8/21/2020	REVISED -

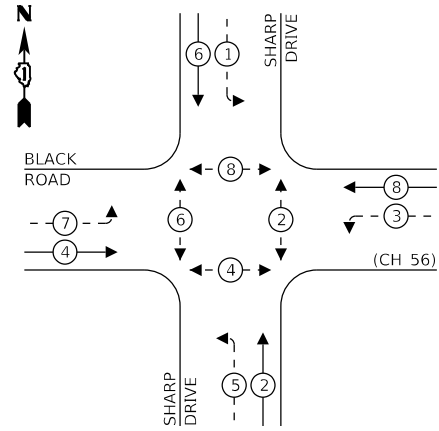
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODERNIZATION PLAN
BLACK ROAD AT SHARP DRIVE**

SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	10
CONTRACT NO. 61G36			ILLINOIS FED. AID PROJECT	

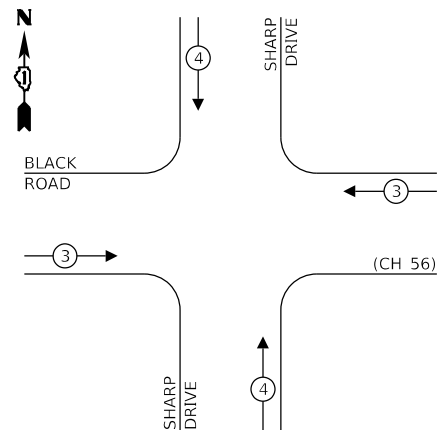
EXISTING CONTROLLER SEQUENCE



LEGEND:

- ← * → PROTECTED PHASE
- ← - * - → PROTECTED/PERMITTED PHASE
- ← * → PEDESTRIAN PHASE
- ← * OL → OVERLAP

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	11	50	66
(YELLOW)	12	20	5	12
(GREEN)	12	12	45	65
PERMISSIVE ARROW	16	10	10	16
PED. SIGNAL	8	20	100	160
CONTROLLER	1	100	100	100
UPS	-	25	100	25
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	250	50	-
TOTAL =				444

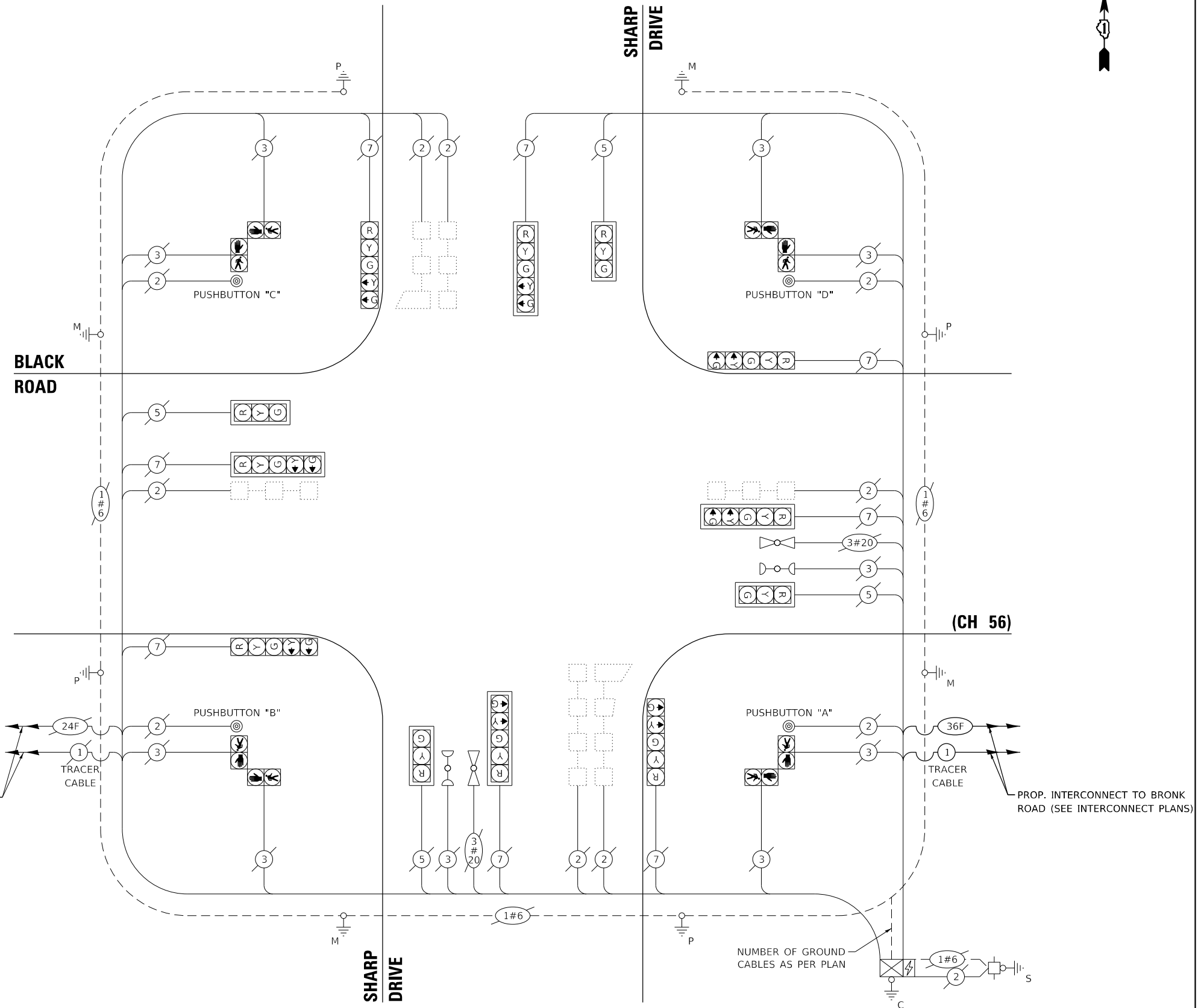
ENERGY COSTS TO:

VILLAGE OF SHOREWOOD
ONE TOWNE CENTER BOULEVARD
SHOREWOOD, IL 60404

ENERGY SUPPLY: CONTACT: TIM COSLET
PHONE: (815) 724-5010
COMPANY: COM-ED
ACCOUNT NUMBER: -

NOTE:
PUSH BUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4.
PUSH BUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6.
PUSH BUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8.
PUSH BUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.



CABLE PLAN
(NOT TO SCALE)

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 11

FILE NAME = Black @ Sharp Perm Cable.dgn
5388.800
Default

USER NAME = zwallsten
PLOT SCALE = 1:40
PLOT DATE = 8/20/2020

DESIGNED - DPB
DRAWN - ZCW
CHECKED - DPB
DATE - 8/21/2020

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM,
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
BLACK ROAD AT SHARP DRIVE

SCALE: None SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	11
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				

IDOT ECON 142

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1

IDOT ECON 142

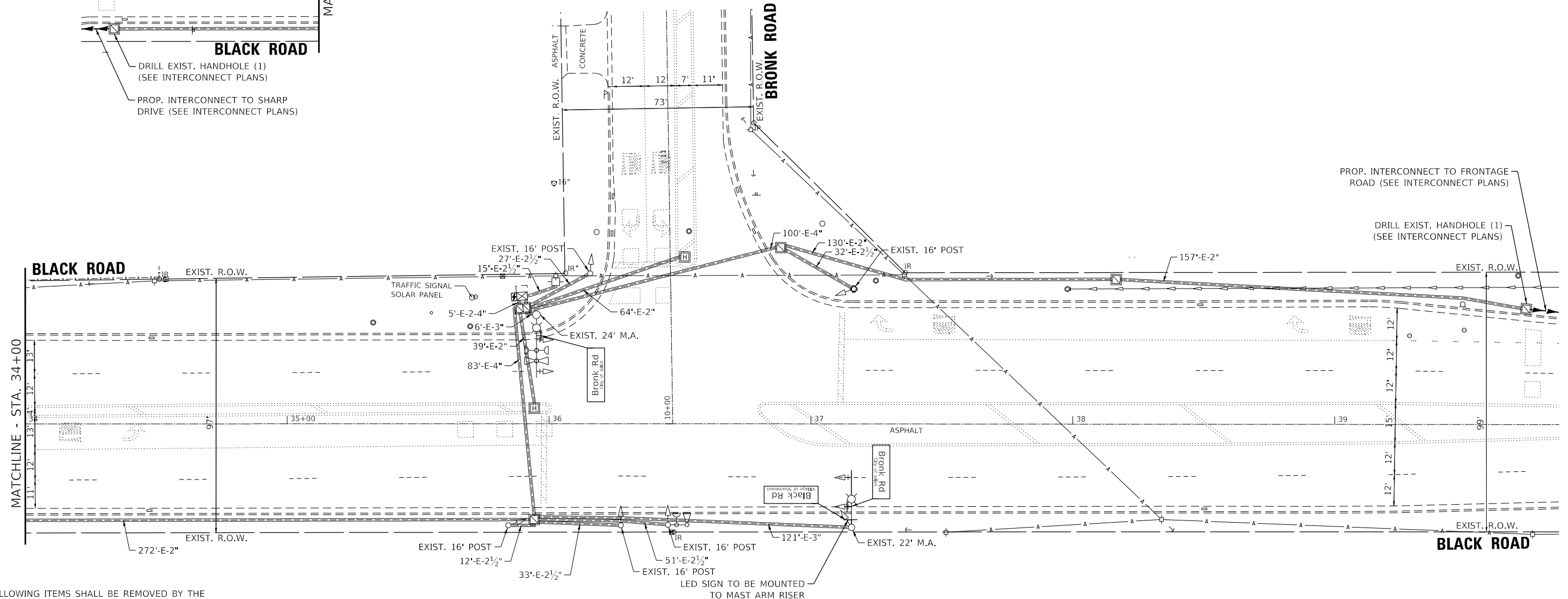
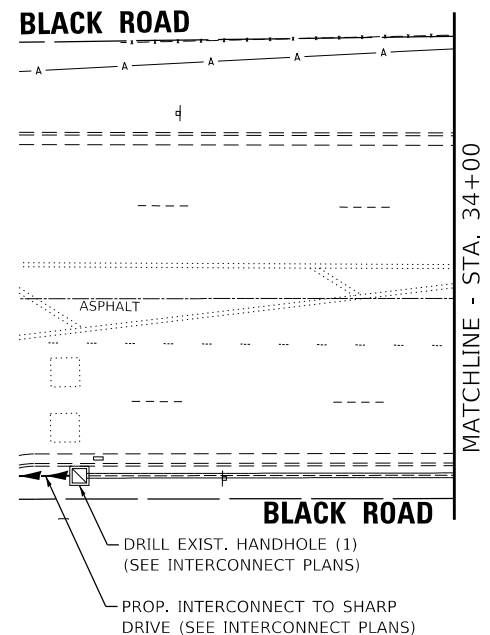
FILE NAME =	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
Black @ Sharp Sign.dgn		DRAWN - ZCW	REVISED -
5388.800	PLOT SCALE = 1:40	CHECKED - DPB	REVISED -
Default	PLOT DATE = 8/20/2020	DATE - 8/21/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES
BLACK ROAD AT SHARP DRIVE**

SCALE: None SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	12
CONTRACT NO. 61G36			ILLINOIS	FED. AID PROJECT



PROP. INTERCONNECT TO FRONTAGE ROAD (SEE INTERCONNECT PLANS)

DRILL EXIST. HANDHOLE (1) (SEE INTERCONNECT PLANS)

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

3 EACH STREET NAME SIGN

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 13

FILE NAME =	USER NAME = zwallsten
Black @ Bronk Perm Signal.dgn	
5388.800	
Default	

PLOT SCALE = 1:40	CHECKED - DPB	REVISIED -
PLOT DATE = 8/20/2020	DATE - 8/21/2020	REVISIED -

DESIGNED - DPB	REVISIED -
DRAWN - ZCW	REVISIED -
CHECKED - DPB	REVISIED -
DATE - 8/21/2020	REVISIED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

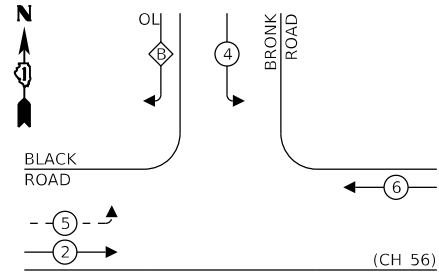
**TRAFFIC SIGNAL MODERNIZATION PLAN
BLACK ROAD AT BRONK ROAD**

SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	13
CONTRACT NO. 61G36			ILLINOIS FED. AID PROJECT	

IDOT ECON 142

EXISTING CONTROLLER SEQUENCE



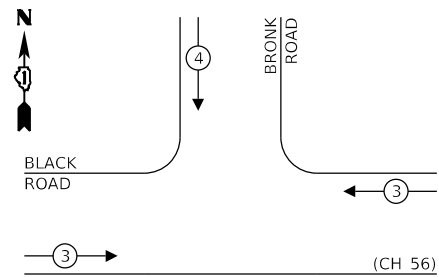
LEGEND:

- ← * → PROTECTED PHASE
- ← - * - → PROTECTED/PERMITTED PHASE
- ← * → PEDESTRIAN PHASE
- ← * → OL OVERLAP

RIGHT TURN OVERLAP PHASE DESIGNATION:

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	=	4, 5

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	10	11	50	55
(YELLOW)	10	20	5	10
(GREEN)	10	12	45	54
PERMISSIVE ARROW	4	10	10	4
PED. SIGNAL	-	20	100	-
CONTROLLER	1	100	100	100
UPS	1	25	100	25
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	3	120	50	180
LUMINAIRE	2	250	50	250
TOTAL =				688

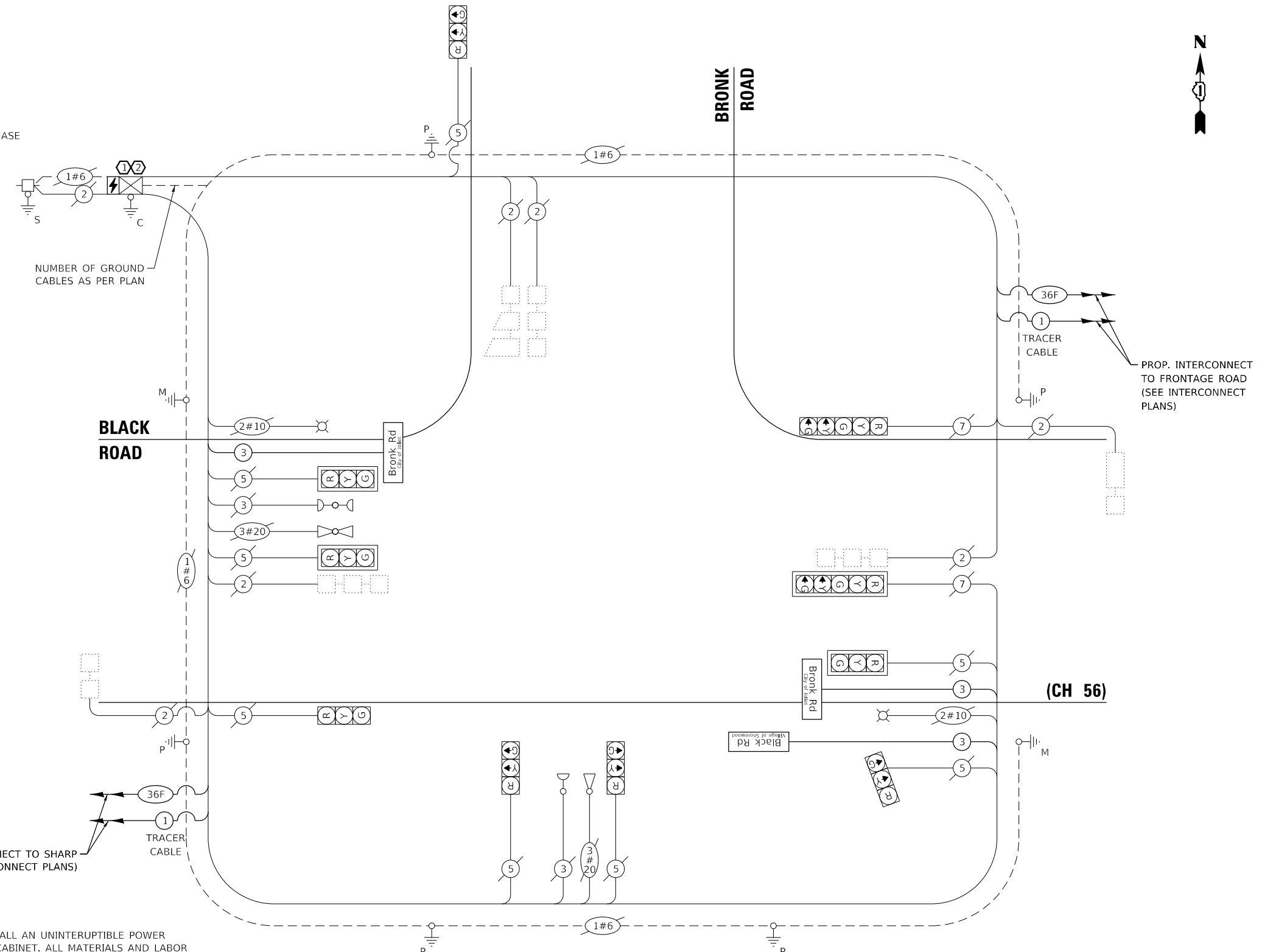
ENERGY COSTS TO:

CITY OF JOLIET
150 W. JEFFERSON STREET
JOLIET, IL 60432-1148

ENERGY SUPPLY: CONTACT: TIM COSLET
PHONE: (815) 724-5010
COMPANY: COM-ED
ACCOUNT NUMBER: -

- CONSTRUCTION NOTE:**
- THE CONTRACTOR SHALL INSTALL AN UNINTERRUPTIBLE POWER SUPPLY IN THE CONTROLLER CABINET. ALL MATERIALS AND LABOR REQUIRED TO INSTALL THE UNINTERRUPTIBLE POWER SUPPLY TO THE SATISFACTION OF THE ENGINEER SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE OF "MODIFY EXISTING CONTROLLER CABINET" AND "UNINTERRUPTIBLE POWER SUPPLY, SPECIAL".
 - THE CONTRACTOR SHALL UPGRADE THE EXISTING ECONOLITE ASC/3 TRAFFIC SIGNAL CONTROLLER TO THE MOST RECENT SOFTWARE VERSION. ALL WORK REQUIRED TO UPGRADE THE CONTROLLER SOFTWARE TO THE SATISFACTION OF THE JOLIET ENGINEER SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "MODIFY EXISTING CONTROLLER".

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.



CABLE PLAN
(NOT TO SCALE)

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 14

FILE NAME = Black @ Bronk Perm Cable.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
5388.800	PLOT SCALE = 1:40	DRAWN - ZCW	REVISED -
Default	PLOT DATE = 8/20/2020	CHECKED - DPB	REVISED -
		DATE - 8/21/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

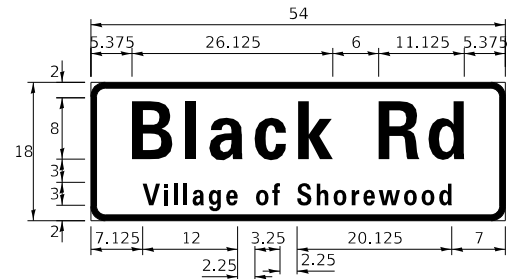
CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE BLACK ROAD AT BRONK ROAD			
SCALE: None	SHEET	OF SHEETS	STA. TO STA.

F.A.U. RTE. 298	SECTION 18-00517-00-TL	COUNTY WILL	TOTAL SHEETS 72	SHEET NO. 14
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				

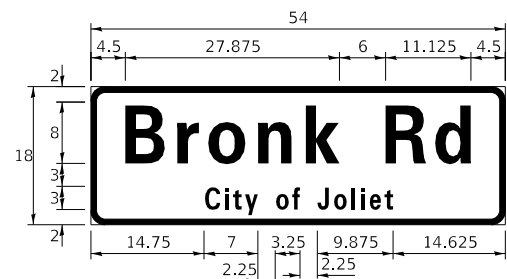
IDOT ECON 142

INTERNALLY ILLUMINATED LED

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	6.75	1	ZZ	1



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	6.75	1	ZZ	2

NOTE: FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS DETAIL.

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
REMOVE SIGN PANEL - TYPE 1	SQ FT	20.25
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	3
ELECTRIC CABLE IN CONDUIT, STREET NAME SIGN, NO. 14 3C, TYPE SOOW	FOOT	594
SIGN SUPPORT SPECIAL	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1

pelco PH: 405-340-3434 FAX: 405-340-3435 Edmond, OK 73013 www.pelcoinc.com

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ASSEMBLY CUT SHEET

REF: TITLE: Astro Sign-Brac, Galaxy, Overhead Street Name Signs, Cable Mount, Alum PART NO.: AG-0144

Example Part No. AG-0144-48-84-PXX
AG-0144-48-84-SS-PXX
CTC
Cable Length
Stainless Upgrade
Process No Color=PNC
Paint=PXX

2 Sign Clamps
Sign 18" 24" 30" 36"
Max CTC 12" 18" 24" 30"

4 Sign Clamps
Sign 42" 48" 54" 60" 66" 72" 78" 84" 90" 96"
Max CTC 36" 42" 48" 54" 60" 66" 72" 78" 84" 90"

6 Sign Clamps
Sign 102" 108" 114"
Max CTC 96" 102" 108"

CTC
SIGN

Cable Length	Max Pole Dia	Max Pole Dia w/ Ty-Back
62"	7.0"	4.5"
84"	10.5"	7.6"
96"	12.4"	9.6"
110"	14.6"	11.8"
120"	16.2"	13.4"
132"	18.2"	15.3"
144"	20.1"	17.2"
220"	32.2"	29.3"
280"	35.0"	35.0"

Notes:
130 mph wind zone maximum: 16 sq-ft
150 mph wind zone maximum: 12 sq-ft
1. The above capacities are only for applications with the clamp mounting in the center of the sign.
2. Signs must be properly engineered for application.
3. 5/16" sign mounting bolts to be torqued to 12 ft-lb
4. Parts list reflects 2 sign clamp configuration.
5. Tube is 4" longer than max CTC.
6. Stainless Upgrade=Stainless cable on clamp kit.

Options
CTC=Center to Center, Max See Chart
Cable Length:
Min 4.5" Pole Dia, See Chart for Max
SS=Stainless Upgrade
Paint

ITEM	PART NUMBER	DESCRIPTION	QTY
1	AG-3055-L-GLV-PXX	Astro-Brac Clamp Kit, Galaxy Hinged, Galv Cable, Alum	1
2	AB-0390-L-PXX	Gusseted Tube w/ 3/4" Opening, 1-1/2" x Length, 6063-T6 Alum	1
3	AB-0502-04-PXX	Sign Clamp w/ Hardware, Astro-Brac, 4", Alum	2

DATE: 7/10/2015 11:11 AM DESIGNED: 7/10/2015 11:11 AM CHECKED: 7/10/2015 11:11 AM REV: 7/10/2015 11:11 AM D: 12/17/16 TRJ/BPM 12/20/2016 SHEET 1 OF 1

SIGN SUPPORT SPECIAL DETAIL

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 15

FILE NAME = Black @ Bronk Sign.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
5388.800	PLOT SCALE = 1:40	CHECKED - DPB	REVISED -
Default	PLOT DATE = 8/20/2020	DATE - 8/21/2020	REVISED -

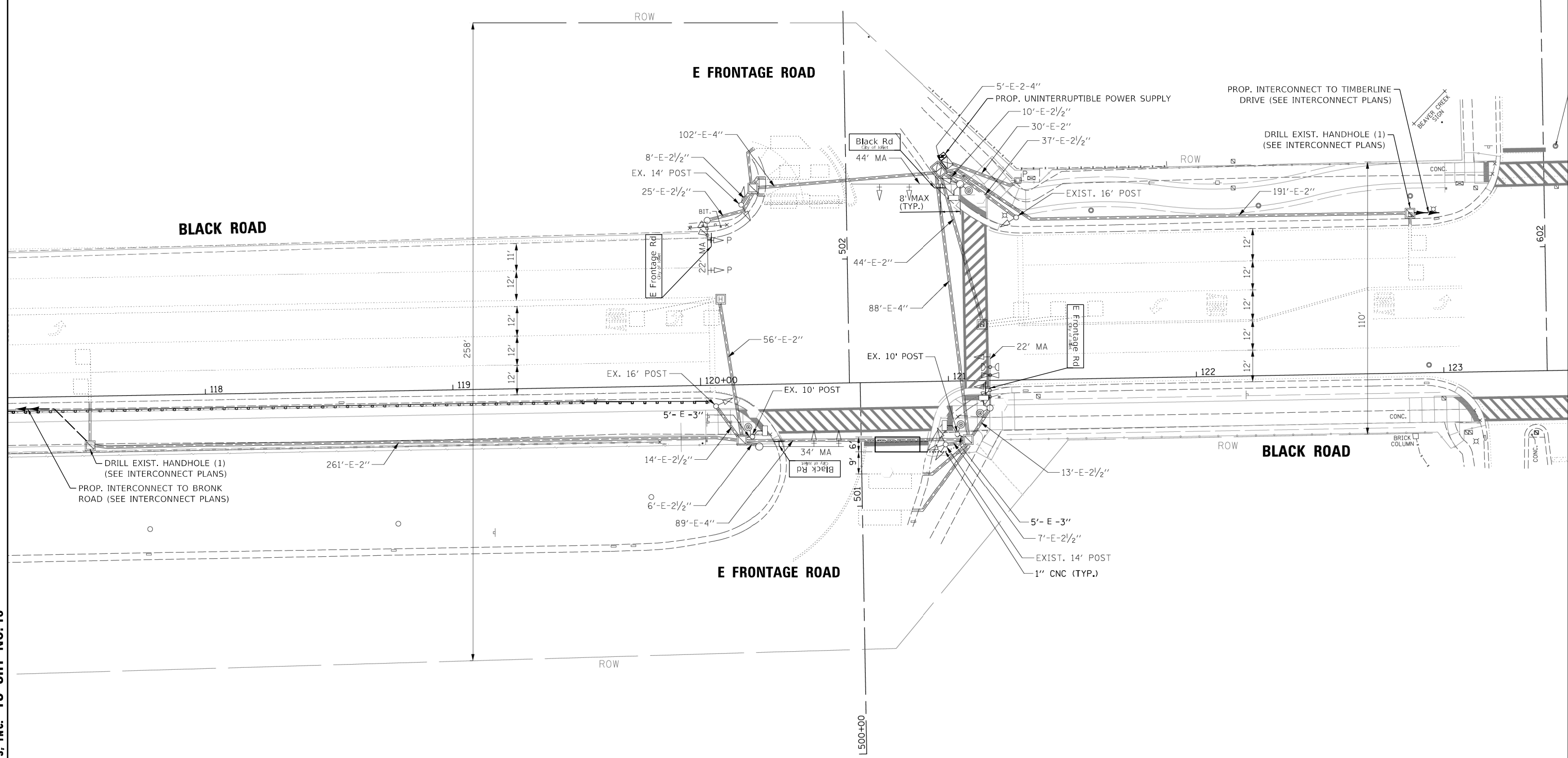
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**L.E.D. ILLUMINATED MAST ARM MOUNTED STREET NAME SIGNS
AND SCHEDULE OF QUANTITIES
BLACK ROAD AT BRONK ROAD**

SCALE: None SHEET OF SHEETS STA. TO STA.

F.A.U. RTE. 298	SECTION 18-00517-00-TL	COUNTY WILL	TOTAL SHEETS 72	SHEET NO. 15
CONTRACT NO. 61G36			ILLINOIS FED. AID PROJECT	

IDOT ECON 142



GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 16

FILE NAME =	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
Black @ Frontage Perm Signal.dgn		DRAWN - ZCW	REVISED -
5388.800		CHECKED - DPB	REVISED -
Reference Plans		DATE - 8/21/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

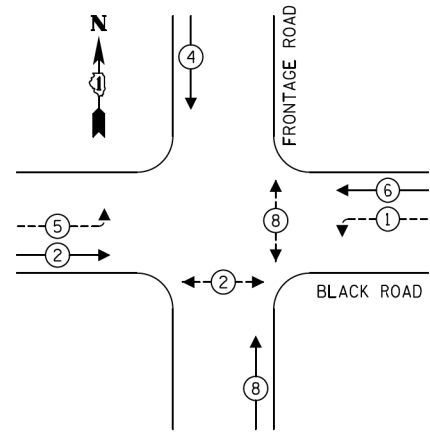
**TRAFFIC SIGNAL MODERNIZATION PLAN
BLACK ROAD AT EAST FRONTAGE ROAD**

SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	16
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				

JOLIET ECON 1

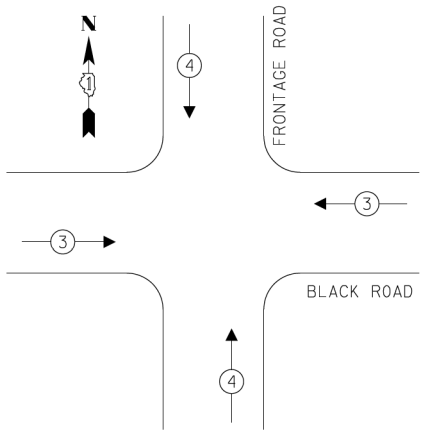
EXISTING CONTROLLER SEQUENCE



LEGEND:

- ← * → PROTECTED PHASE
- ← * - - - PROTECTED/PERMITTED PHASE
- ← * → PEDESTRIAN PHASE
- ← * OL → OVERLAP

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE

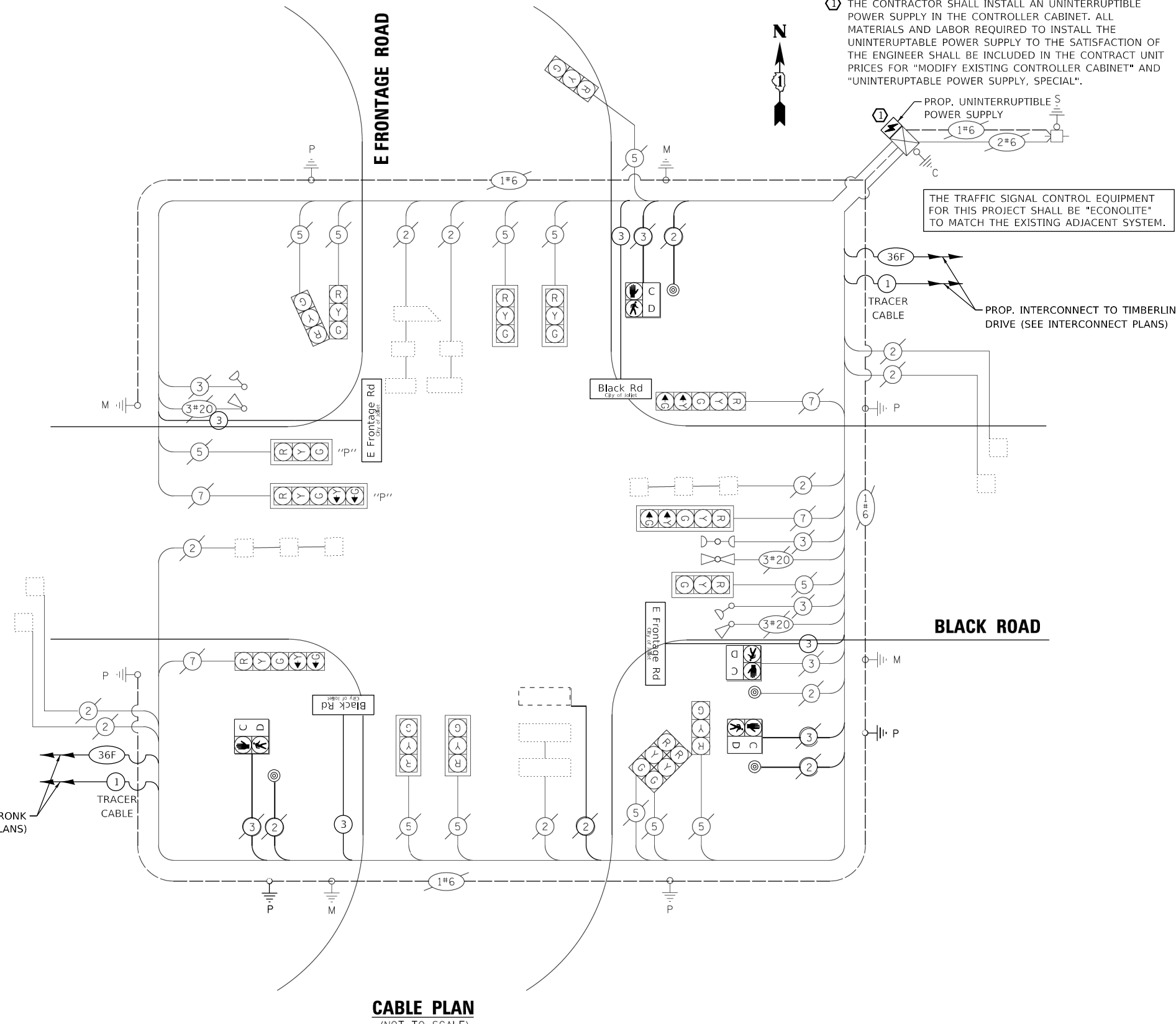


TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	16	11	50	88.0
(YELLOW)	16	20	5	16.0
(GREEN)	16	12	45	86.4
PERMISSIVE ARROW	8	10	10	8.0
PED. SIGNAL	4	20	100	80.0
CONTROLLER	1	100	100	100.0
UPS	-	25	100	-
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	4	120	50	240
LUMINAIRE	-	-	-	-
TOTAL =				618.4

ENERGY COSTS TO:
 WILL COUNTY DIVISION OF TRANSPORTATION
 719 BATAVIA AVENUE
 GENEVA, ILLINOIS 60134
 ENERGY SUPPLY: CONTACT: TIM COSLET
 PHONE: (815) 724-5010
 COMPANY: COMMONWEALTH EDISON
 ACCOUNT NUMBER: ---

FILE NAME = Black @ Frontage Perm Cable.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
5388.800	PLOT SCALE = 1:40	DRAWN - ZCW	REVISED -
Reference Plans	PLOT DATE = 8/20/2020	CHECKED - DPB	REVISED -
		DATE - 8/21/2020	REVISED -



CONSTRUCTION NOTE:
 ① THE CONTRACTOR SHALL INSTALL AN UNINTERRUPTIBLE POWER SUPPLY IN THE CONTROLLER CABINET. ALL MATERIALS AND LABOR REQUIRED TO INSTALL THE UNINTERRUPTIBLE POWER SUPPLY TO THE SATISFACTION OF THE ENGINEER SHALL BE INCLUDED IN THE CONTRACT UNIT PRICES FOR "MODIFY EXISTING CONTROLLER CABINET" AND "UNINTERRUPTIBLE POWER SUPPLY, SPECIAL".

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

PROP. INTERCONNECT TO TIMBERLINE DRIVE (SEE INTERCONNECT PLANS)

PROP. INTERCONNECT TO BRONK ROAD (SEE INTERCONNECT PLANS)

CABLE PLAN
(NOT TO SCALE)

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 17

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE BLACK ROAD AT EAST FRONTAGE ROAD

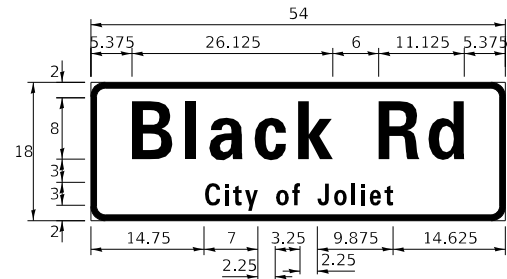
SCALE: None SHEET OF SHEETS STA. TO STA.

F.A.U. RTE. 298	SECTION 18-00517-00-TL	COUNTY WILL	TOTAL SHEETS 72	SHEET NO. 17
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				

JOLIET ECON 1

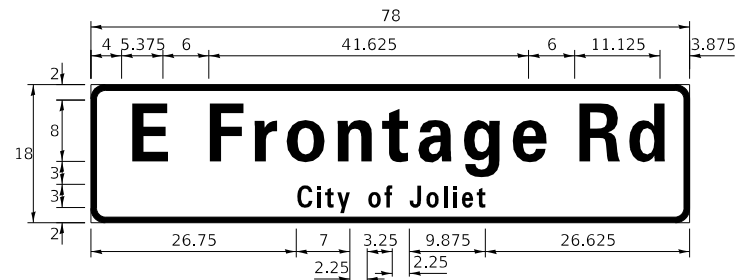
INTERNALLY ILLUMINATED LED

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	6.75	1	ZZ	2

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



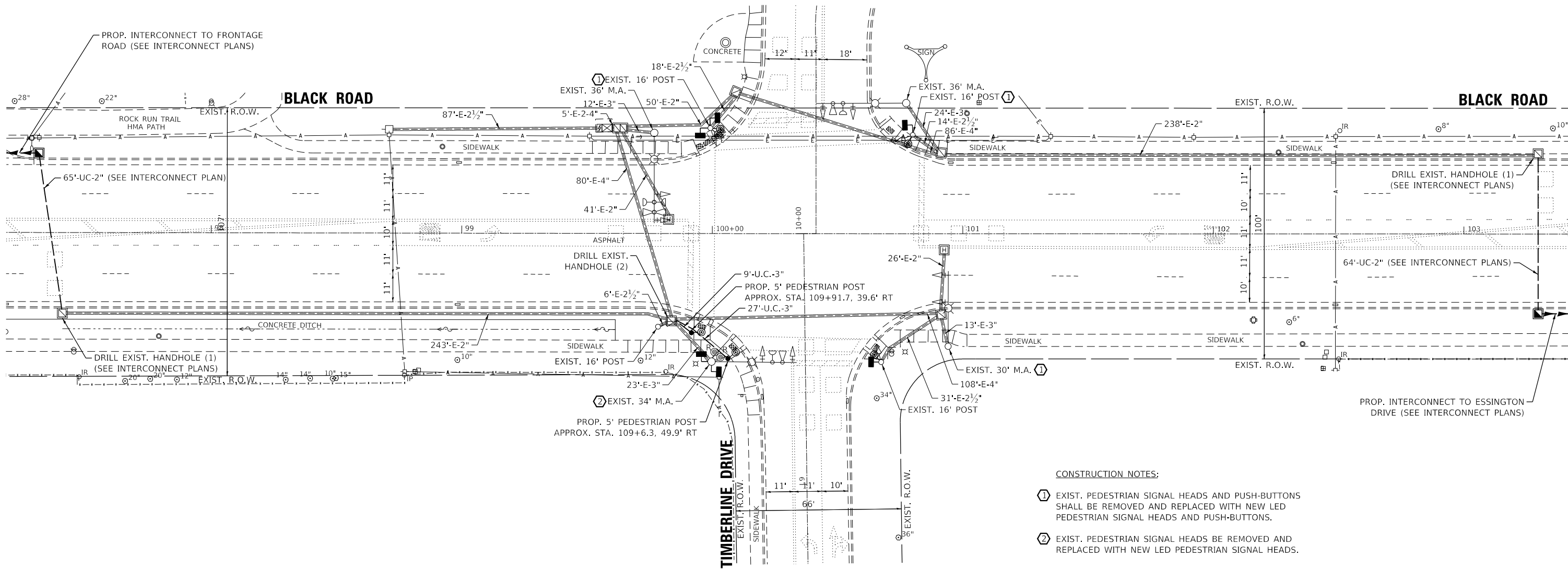
DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	9.75	2	ZZ	2

NOTE: FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS DETAIL.

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
REMOVE SIGN PANEL - TYPE 2	SQ FT	13.5
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
ELECTRIC CABLE IN CONDUIT, STREET NAME SIGN, NO. 14 3C, TYPE SOOW	FOOT	801
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1

FILE NAME = Black @ Frontage Sign.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES BLACK ROAD AT EAST FRONTAGE ROAD	F.A.U. RTE. = 298	SECTION = 18-00517-00-TL	COUNTY = WILL	TOTAL SHEETS = 72	SHEET NO. = 18		
5388.800	PLOT SCALE = 1:40	CHECKED - DPB	REVISED -			CONTRACT NO. 61G36						
Default	PLOT DATE = 8/20/2020	DATE = 8/21/2020	REVISED -			SCALE: None	SHEET OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT			



THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 6 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 6 EACH PEDESTRIAN PUSH-BUTTON

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 19

FILE NAME = Black @ Timberline Perm Signal.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
5388.800	PLOT SCALE = 1:40	DRAWN - ZCW	REVISED -
Default	PLOT DATE = 8/20/2020	CHECKED - DPB	REVISED -
		DATE - 8/21/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

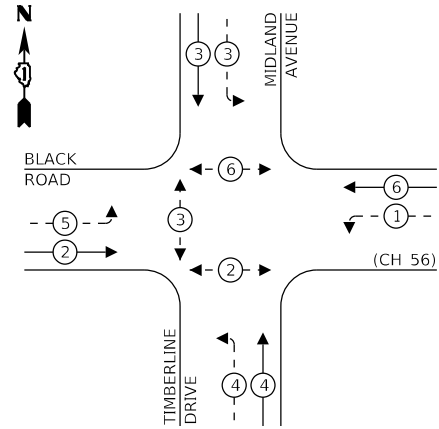
**TRAFFIC SIGNAL MODERNIZATION PLAN
BLACK ROAD AT TIMBERLINE DRIVE**

SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	19
ILLINOIS FED. AID PROJECT			CONTRACT NO. 61G36	

JOLIET ECON 1

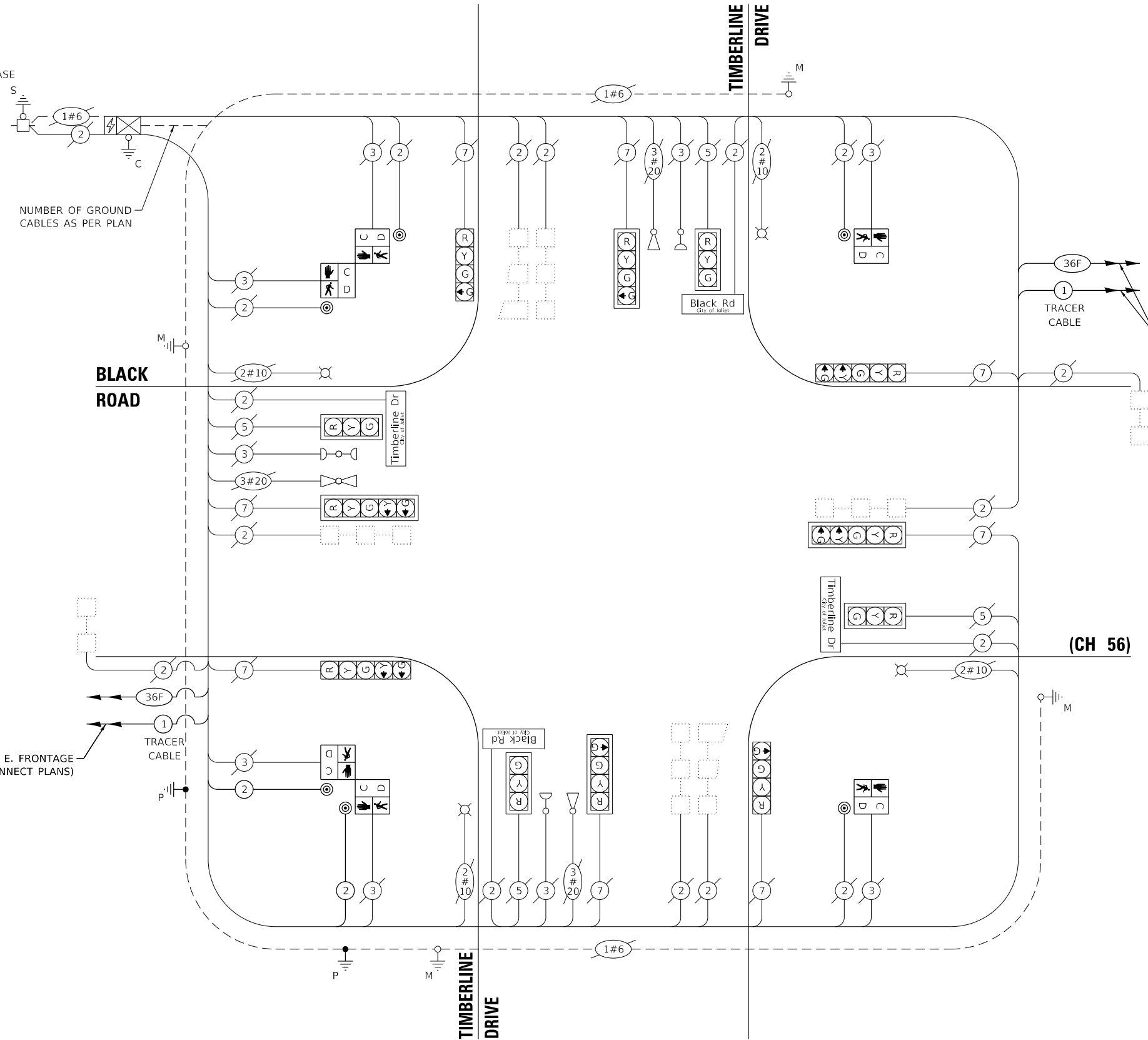
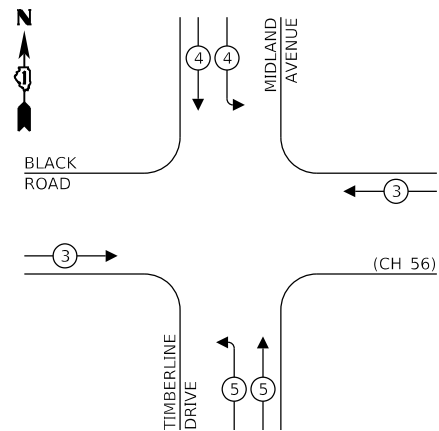
EXISTING CONTROLLER SEQUENCE



LEGEND:

- ← * → PROTECTED PHASE
- ← - * - → PROTECTED/PERMITTED PHASE
- ← * → PEDESTRIAN PHASE
- ← * → OL OVERLAP

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROP. INTERCONNECT TO ESSINGTON ROAD (SEE INTERCONNECT PLANS)

PROP. INTERCONNECT TO E. FRONTAGE ROAD (SEE INTERCONNECT PLANS)

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	11	50	66
(YELLOW)	12	20	5	12
(GREEN)	12	12	45	64.8
PERMISSIVE ARROW	4	10	10	4
PED. SIGNAL	8	20	100	160
CONTROLLER	1	100	100	100
UPS	1	25	100	25
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	4	120	50	240
LUMINAIRE	4	250	50	500
TOTAL =				1,171.8

ENERGY COSTS TO:

CITY OF JOLIET
150 W. JEFFERSON STREET
JOLIET, IL 600432-1148

ENERGY SUPPLY: CONTACT: TIM COSLET
PHONE: (815) 724-5010
COMPANY: COM-ED
ACCOUNT NUMBER: -

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

CABLE PLAN
(NOT TO SCALE)

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 20

FILE NAME = Black @ Timberline Perm Cable.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
5388.800	PLOT SCALE = 1:40	DRAWN - ZCW	REVISED -
Default	PLOT DATE = 8/20/2020	CHECKED - DPB	REVISED -
		DATE - 8/21/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
BLACK ROAD AT TIMBERLINE DRIVE**

SCALE: None SHEET OF SHEETS STA. TO STA.

F.A.U. RTE. 298	SECTION 18-00517-00-TL	COUNTY WILL	TOTAL SHEETS 72	SHEET NO. 20
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				

JOLIET ECON 1

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	36
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	65
DRILL EXISTING HANDHOLE	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	6
PEDESTRIAN PUSH-BUTTON	EACH	6
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
PEDESTRIAN SIGNAL POST, 5 FT.	EACH	2
CONCRETE FOUNDATION, TYPE A 10-INCH DIAMETER	FOOT	8

FILE NAME =	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
Black @ Timberline Sign.dgn		DRAWN - ZCW	REVISED -
5388.800	PLOT SCALE = 1:40	CHECKED - DPB	REVISED -
Default	PLOT DATE = 8/20/2020	DATE - 8/21/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES
BLACK ROAD AT TIMBERLINE DRIVE**

SCALE: None SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	21
ILLINOIS			CONTRACT NO. 61G36	
FED. AID PROJECT				



EXIST. INTERCONNECT TO INGALLS AVENUE (SEE INTERCONNECT PLANS)

ESSINGTON ROAD

MATCHLINE - STA. 11+50

ESSINGTON ROAD

MATCHLINE - STA. 11+50

BLACK ROAD

EXIST. R.O.W.

PROP. 5' PEDESTRIAN POST APPROX. STA. 115+14.5, 58.6' LT

DRILL EXISTING HANDHOLE (1) 5'-U.C.-3"

EXIST. 44' M.A. 16'-E-3"

PAVEMENT MARKINGS TO BE REMOVED (TYP.)

EXISTING RADIO INTERCONNECT TO GLENWOOD AVENUE (SEE INTERCONNECT PLANS)

PROP. INTERCONNECT TO 129TH INFANTRY DRIVE (SEE INTERCONNECT PLANS)

DRILL EXIST. HANDHOLE (1) (SEE INTERCONNECT PLANS)

EXIST. R.O.W.

DRILL EXIST. HANDHOLE (1) (SEE INTERCONNECT PLANS)

PROP. INTERCONNECT TO TIMBERLINE DRIVE (SEE INTERCONNECT PLANS)

PROP. 5' PEDESTRIAN POST APPROX. STA. 115+16.0, 52.3' RT

EXIST. 44' M.A.

ESSINGTON ROAD

MATCHLINE - STA. 8+50

ESSINGTON ROAD

MATCHLINE - STA. 8+50

BLACK ROAD

CONSTRUCTION NOTES:

- ① EXIST. SIGNAL HEADS SHALL BE REMOVED AND REPLACED WITH NEW LED SIGNAL HEADS.
- ② EXIST. PEDESTRIAN SIGNAL HEADS AND PUSH-BUTTONS SHALL BE REMOVED AND REPLACED WITH NEW LED PEDESTRIAN SIGNAL HEADS AND PUSH-BUTTONS.
- ③ EXIST. PEDESTRIAN SIGNAL HEADS AND PUSH-BUTTONS SHALL BE REMOVED AND REPLACED WITH NEW LED PEDESTRIAN SIGNAL HEADS AND PUSH-BUTTONS FOR ESSINGTON ROAD CROSSING ONLY.
- ④ EXIST. PEDESTRIAN SIGNAL HEADS AND PUSH-BUTTONS SHALL BE REMOVED AND REPLACED WITH NEW LED PEDESTRIAN SIGNAL HEADS AND PUSH-BUTTONS FOR BLACK ROAD CROSSING ONLY.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 12 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 4 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 8 EACH TRAFFIC SIGNAL BACKPLATE
- 8 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 8 EACH PEDESTRIAN PUSH-BUTTON
- 4 EACH STREET NAME SIGN

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 22

FILE NAME =	Black @ Essington Perm Signal.dgn
5388.800	
Default	

USER NAME =	zwallsten
PLOT SCALE =	1:40
PLOT DATE =	8/20/2020

DESIGNED -	DPB
DRAWN -	ZCW
CHECKED -	DPB
DATE -	8/21/2020

REVISED -	
REVISED -	
REVISED -	
REVISED -	

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN BLACK ROAD AT ESSINGTON ROAD

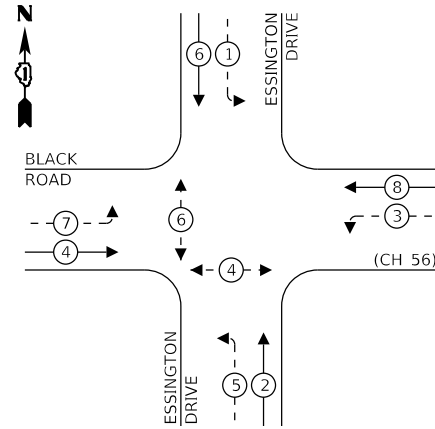
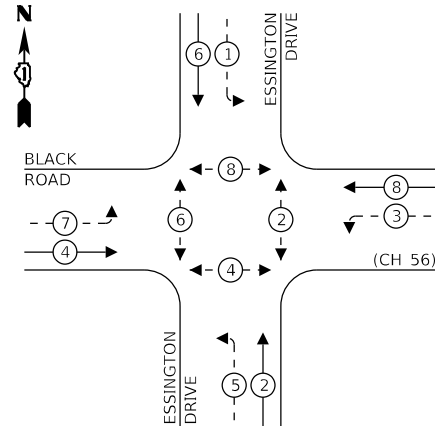
SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	22
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				

JOLIET ECON 1

EXISTING CONTROLLER SEQUENCE

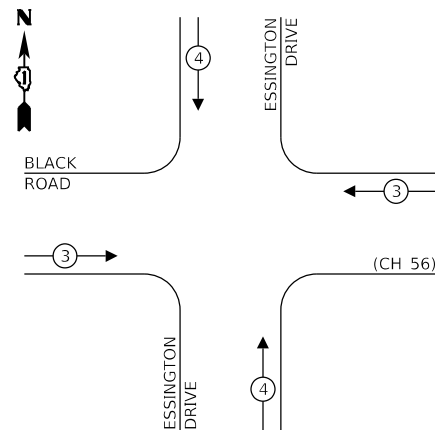
PROPOSED CONTROLLER SEQUENCE



LEGEND:

- ← (circle with asterisk) → PROTECTED PHASE
- ← (circle with asterisk) - → PROTECTED/PERMITTED PHASE
- ← (circle with asterisk) → PEDESTRIAN PHASE
- ← (circle with asterisk) → OL OVERLAP

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	16	11	50	88
(YELLOW)	16	20	5	16
(GREEN)	16	12	45	86.4
PERMISSIVE ARROW	8	10	10	8
PED. SIGNAL	4	20	100	80
CONTROLLER	1	100	100	100
UPS	1	25	100	25
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	4	120	50	240
LUMINAIRE	4	250	50	500
TOTAL =				1,143.4

ENERGY COSTS TO:

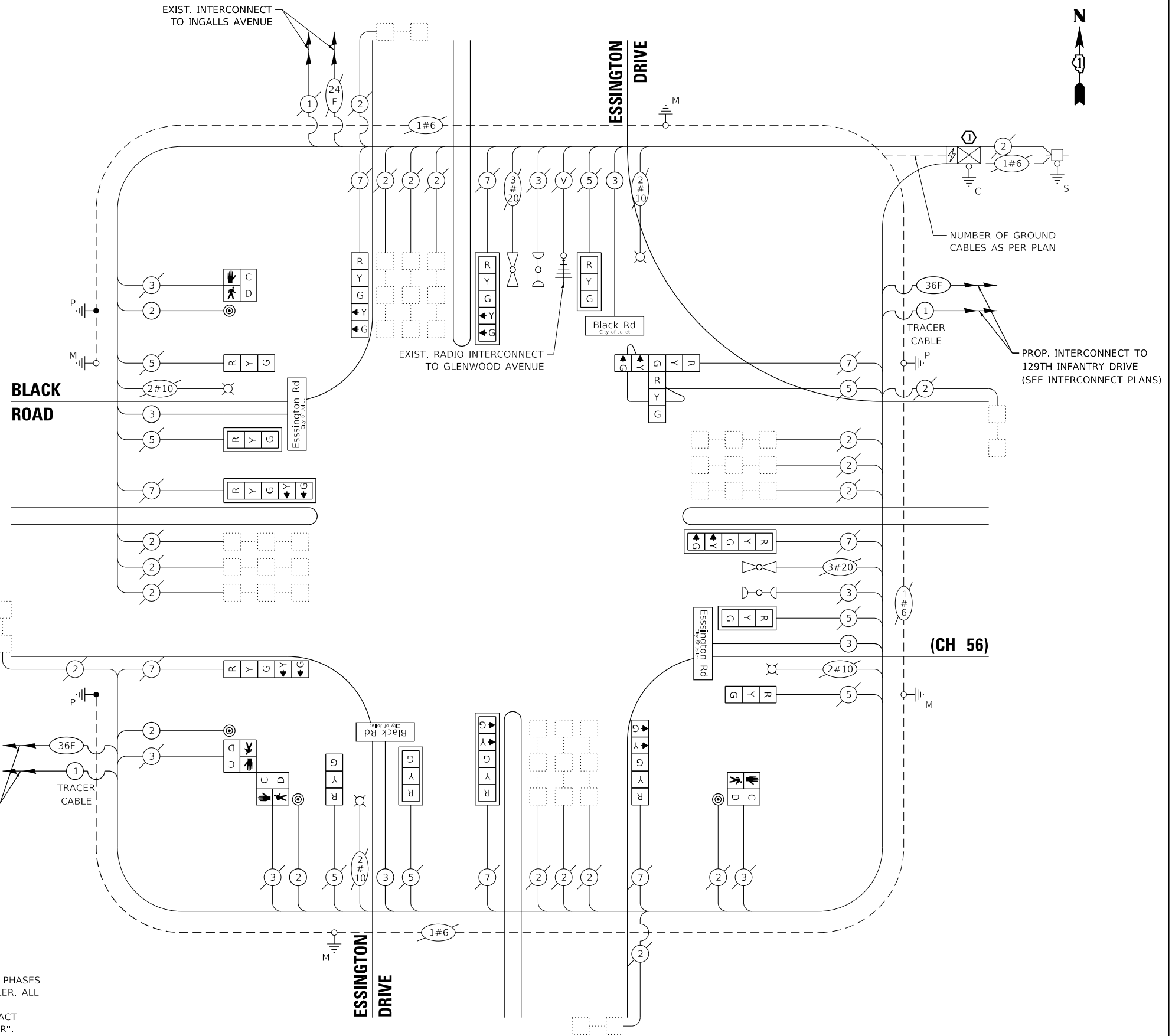
CITY OF JOLIET
150 W. JEFFERSON STREET
JOLIET, IL 60432-1148

ENERGY SUPPLY: CONTACT: TIM COSLET
PHONE: (815) 724-5010
COMPANY: COM-ED
ACCOUNT NUMBER: -

CONSTRUCTION NOTE:

- ① THE CONTRACTOR SHALL REMOVE PEDESTRIAN PHASES 2 AND 8 FROM THE TRAFFIC SIGNAL CONTROLLER. ALL WORK REQUIRED TO UPDATE THE CONTROLLER SEQUENCE SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "MODIFY EXISTING CONTROLLER".

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.



CABLE PLAN
(NOT TO SCALE)

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 23

FILE NAME = Black @ Essington Perm Cable.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
5388.800	PLOT SCALE = 1:40	DRAWN - ZCW	REVISED -
Default	PLOT DATE = 8/20/2020	CHECKED - DPB	REVISED -
		DATE - 8/21/2020	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE BLACK ROAD AT ESSINGTON ROAD

SCALE: None SHEET OF SHEETS STA. TO STA.

F.A.U. RTE. 298	SECTION 18-00517-00-TL	COUNTY WILL	TOTAL SHEETS 72	SHEET NO. 23
ILLINOIS FED. AID PROJECT			CONTRACT NO. 61G36	

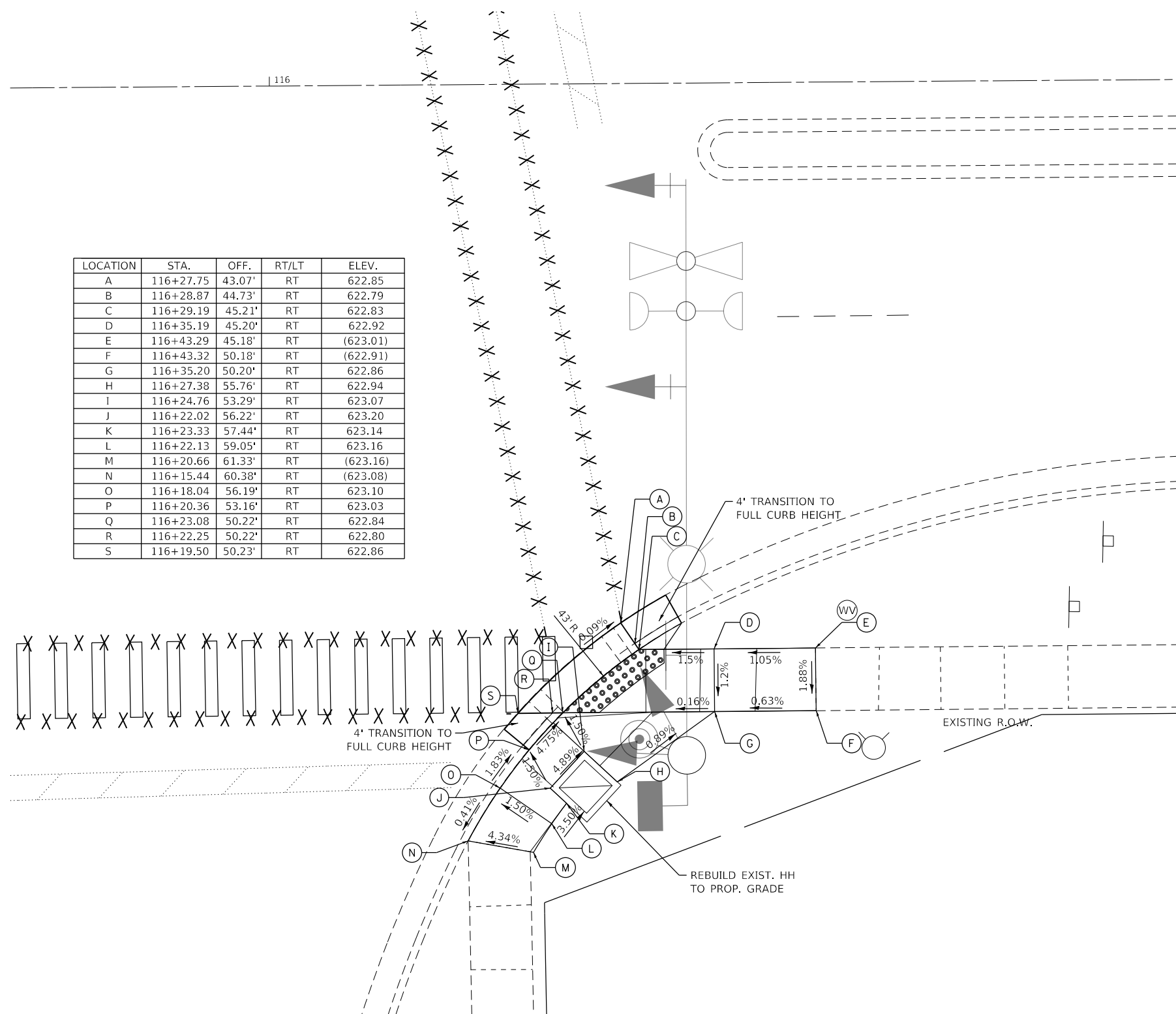
JOLIET ECON 1



BLACK ROAD

LOCATION	STA.	OFF.	RT/LT	ELEV.
A	116+27.75	43.07'	RT	622.85
B	116+28.87	44.73'	RT	622.79
C	116+29.19	45.21'	RT	622.83
D	116+35.19	45.20'	RT	622.92
E	116+43.29	45.18'	RT	(623.01)
F	116+43.32	50.18'	RT	(622.91)
G	116+35.20	50.20'	RT	622.86
H	116+27.38	55.76'	RT	622.94
I	116+24.76	53.29'	RT	623.07
J	116+22.02	56.22'	RT	623.20
K	116+23.33	57.44'	RT	623.14
L	116+22.13	59.05'	RT	623.16
M	116+20.66	61.33'	RT	(623.16)
N	116+15.44	60.38'	RT	(623.08)
O	116+18.04	56.19'	RT	623.10
P	116+20.36	53.16'	RT	623.03
Q	116+23.08	50.22'	RT	622.84
R	116+22.25	50.22'	RT	622.80
S	116+19.50	50.23'	RT	622.86

ESSINGTON ROAD



GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 24

FILE NAME = Black @ Essington ADA.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
5388.800	PLOT SCALE = 1:10	DRAWN - ZCW	REVISED -
Default	PLOT DATE = 8/20/2020	CHECKED - DPB	REVISED -
		DATE - 8/21/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

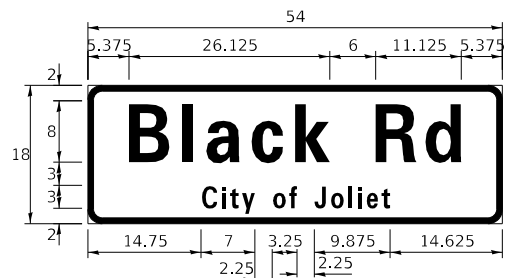
**ADA GRADING PLAN
BLACK ROAD AT ESSINGTON ROAD**

SCALE: 1"=5' SHEET OF SHEETS STA. TO STA.

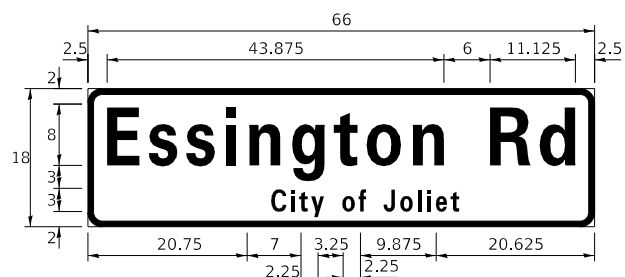
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	24
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				

INTERNALLY ILLUMINATED LED

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	6.75	1	ZZ	2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	8.25	1	ZZ	2

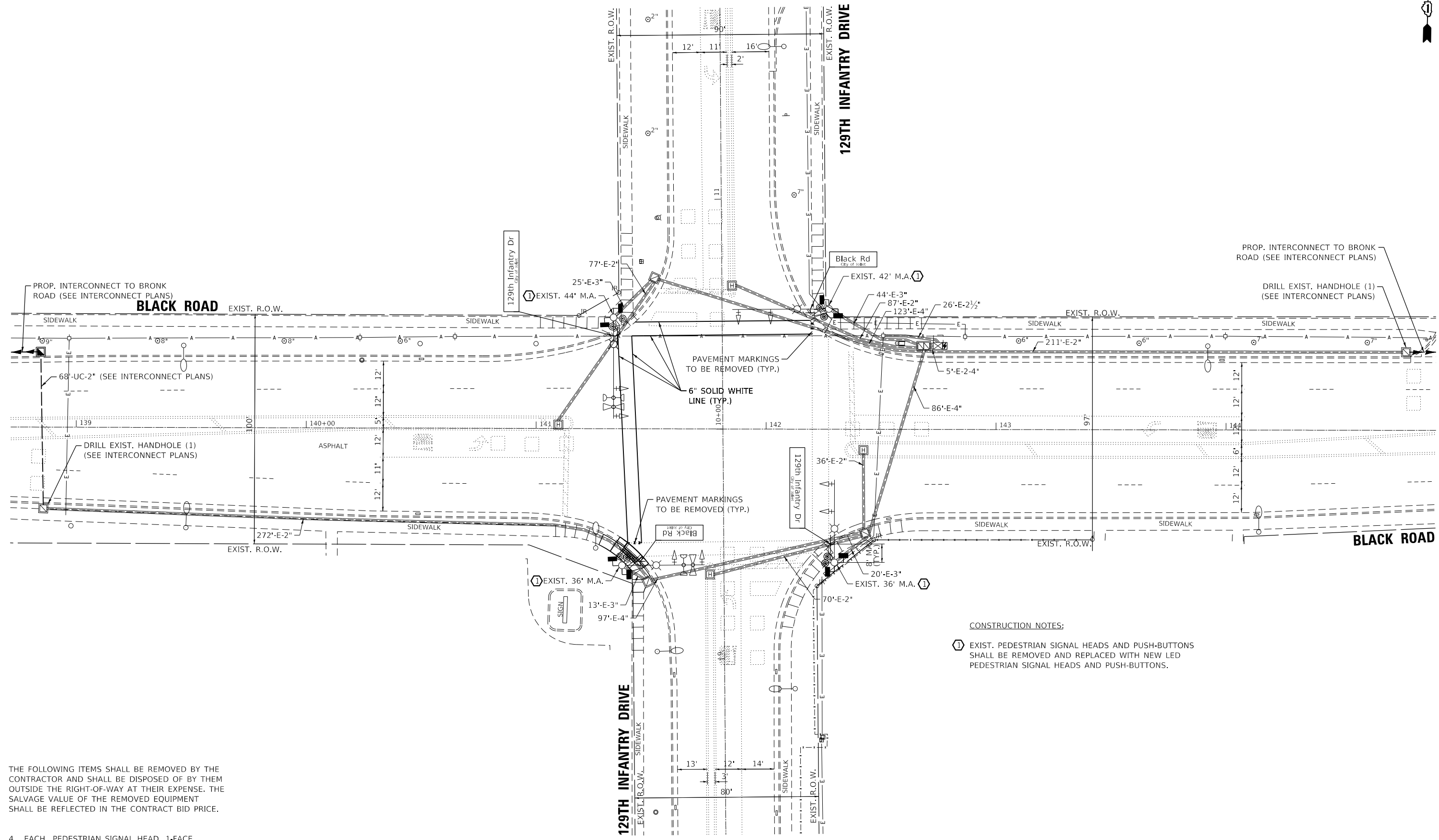
NOTE: FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS DETAIL.

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	165
DETECTABLE WARNINGS	SQ FT	16
SIDEWALK REMOVAL	SQ FT	165
REMOVE SIGN PANEL - TYPE 1	SQ FT	30
THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	378
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	10
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	701
DRILL EXISTING HANDHOLE	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	8
PEDESTRIAN PUSH-BUTTON	EACH	4
MODIFY EXISTING CONTROLLER	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REBUILD EXISTING HANDHOLE	EACH	1
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	170
PEDESTRIAN SIGNAL POST, 5 FT.	EACH	2
ELECTRIC CABLE IN CONDUIT, STREET NAME SIGN, NO. 14 3C, TYPE SOOW	FOOT	735
CURB REMOVAL AND REPLACEMENT	FOOT	17
CONCRETE FOUNDATION, TYPE A 10-INCH DIAMETER	FOOT	8

FILE NAME =	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
Black @ Essington Sign.dgn		DRAWN - ZCW	REVISED -
5388.800	PLOT SCALE = 1:40	CHECKED - DPB	REVISED -
Default	PLOT DATE = 8/20/2020	DATE - 8/21/2020	REVISED -

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	25
CONTRACT NO. 61G36			ILLINOIS FED. AID PROJECT	



CONSTRUCTION NOTES:

① EXIST. PEDESTRIAN SIGNAL HEADS AND PUSH-BUTTONS SHALL BE REMOVED AND REPLACED WITH NEW LED PEDESTRIAN SIGNAL HEADS AND PUSH-BUTTONS.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 4 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 4 EACH PEDESTRIAN PUSH-BUTTON
- 4 EACH STREET NAME SIGN

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 26

FILE NAME =	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
Black @ 129th Infantry Perm Signal.dgn		DRAWN - ZCW	REVISED -
5388.800		CHECKED - DPB	REVISED -
Default		DATE - 8/21/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODERNIZATION PLAN
BLACK ROAD AT 129TH INFANTRY DRIVE**

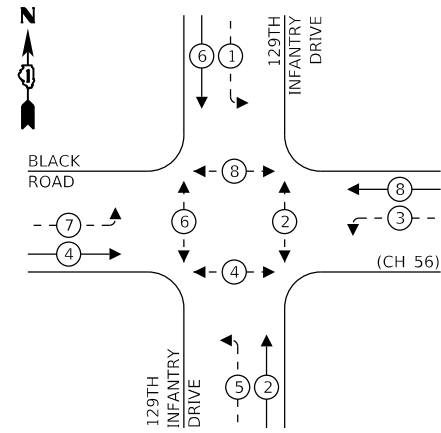
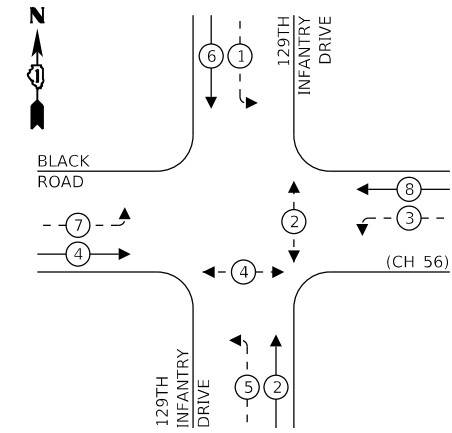
SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	26
ILLINOIS FED. AID PROJECT			CONTRACT NO. 61G36	

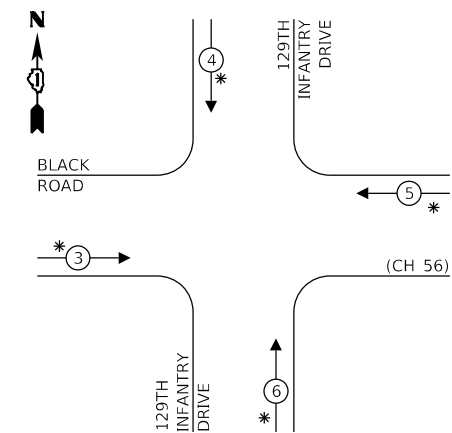
JOLIET ECON 1

EXISTING CONTROLLER SEQUENCE

PROPOSED CONTROLLER SEQUENCE



EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



LEGEND:

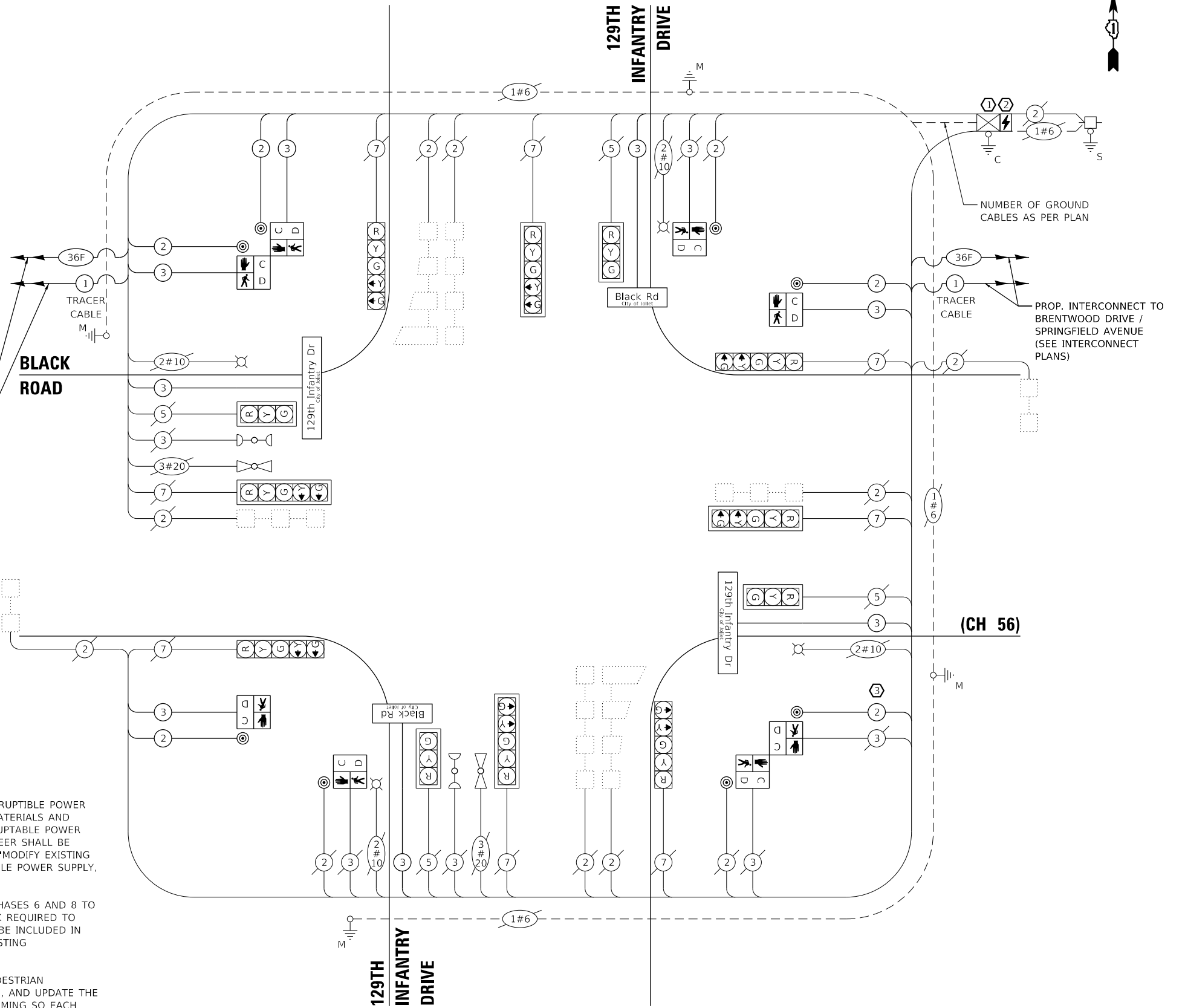
- ⊙ — PROTECTED PHASE
- ⊙ — PROTECTED/PERMITTED PHASE
- ⊙ — PEDESTRIAN PHASE
- OL — OVERLAP
- ⊙ — PROP. INTERCONNECT TO ESSINGTON ROAD (SEE INTERCONNECT PLANS)

* PRE-EMPTERS MUST GO ALL RED PRIOR TO DISPLAYING GREEN DWELL PHASE TO AVOID YELLOW TRAP.

CONSTRUCTION NOTE:

- 1 THE CONTRACTOR SHALL INSTALL AN UNINTERRUPTIBLE POWER SUPPLY IN THE CONTROLLER CABINET. ALL MATERIALS AND LABOR REQUIRED TO INSTALL THE UNINTERRUPTIBLE POWER SUPPLY TO THE SATISFACTION OF THE ENGINEER SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE OF "MODIFY EXISTING CONTROLLER CABINET" AND "UNINTERRUPTIBLE POWER SUPPLY, SPECIAL".
- 2 THE CONTRACTOR SHALL ADD PEDESTRIAN PHASES 6 AND 8 TO THE TRAFFIC SIGNAL CONTROLLER. ALL WORK REQUIRED TO UPDATE THE CONTROLLER SEQUENCE SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "MODIFY EXISTING CONTROLLER".
- 3 THE CONTRACTOR SHALL ADD A SECOND PEDESTRIAN PUSH-BUTTON TO THE SOUTHEAST MAST ARM, AND UPDATE THE CABINET WIRING AND CONTROLLER PROGRAMMING SO EACH BUTTON ONLY CALLS ONE PHASE.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.



CABLE PLAN
(NOT TO SCALE)

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	11	50	66
(YELLOW)	12	20	5	12
(GREEN)	12	12	45	64.8
PERMISSIVE ARROW	8	10	10	8
PED. SIGNAL	8	20	100	160
CONTROLLER	1	100	100	100
UPS	1	25	100	25
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	4	120	50	240
LUMINAIRE	4	250	50	500
TOTAL =				1,175.8

ENERGY COSTS TO:

CITY OF JOLIET
150 W. JEFFERSON STREET
JOLIET, IL 60432-1148

ENERGY SUPPLY: CONTACT: TIM COSLET
PHONE: (815) 724-5010
COMPANY: COM-ED
ACCOUNT NUMBER: -

FILE NAME =	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
Black @ 129th Infantry Perm Cable.dgn		DRAWN - ZCW	REVISED -
5388.800	PLOT SCALE = 1:40	CHECKED - DPB	REVISED -
Default	PLOT DATE = 8/20/2020	DATE - 8/21/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

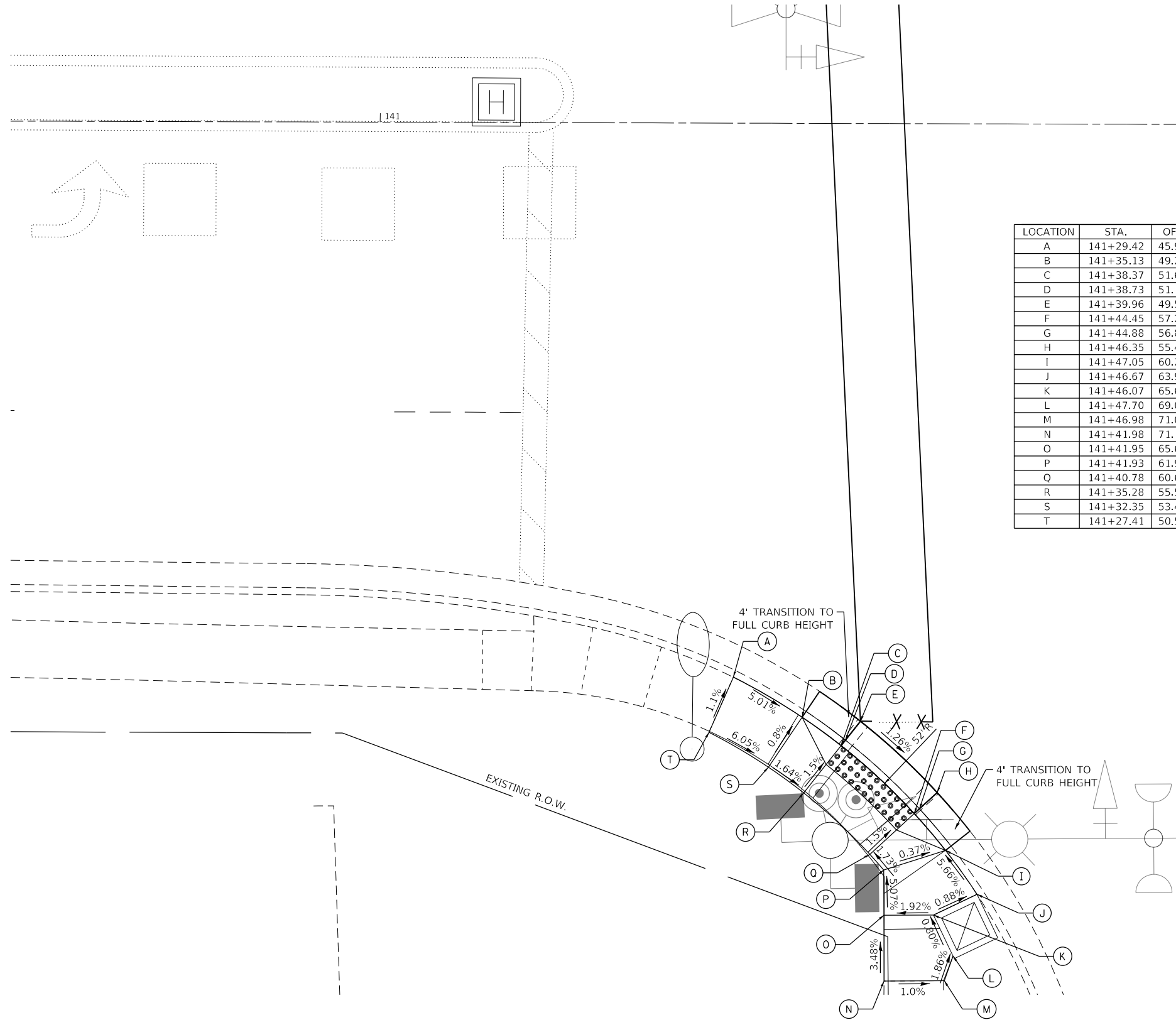
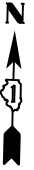
CABLE PLAN, PHASE DESIGNATION DIAGRAM,
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
BLACK ROAD AT 129TH INFANTRY DRIVE

SCALE: None SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	27
ILLINOIS FED. AID PROJECT			CONTRACT NO. 61G36	

JOLIET ECON 1

BLACK ROAD



LOCATION	STA.	OFF.	RT/LT	ELEV.
A	141+29.42	45.95'	RT	(625.49)
B	141+35.13	49.26'	RT	625.16
C	141+38.37	51.61'	RT	625.12
D	141+38.73	51.16'	RT	625.08
E	141+39.96	49.58'	RT	625.14
F	141+44.45	57.23'	RT	625.01
G	141+44.88	56.84'	RT	624.97
H	141+46.35	55.48'	RT	625.03
I	141+47.05	60.27'	RT	625.04
J	141+46.67	63.91'	RT	(625.29)
K	141+46.07	65.65'	RT	(625.33)
L	141+47.70	69.03'	RT	(625.36)
M	141+46.98	71.08'	RT	(625.39)
N	141+41.98	71.13'	RT	(625.44)
O	141+41.95	65.67'	RT	625.25
P	141+41.93	61.92'	RT	625.06
Q	141+40.78	60.62'	RT	625.03
R	141+35.28	55.54'	RT	625.14
S	141+32.35	53.42'	RT	625.20
T	141+27.41	50.53'	RT	(625.55)

129TH INFANTRY DR

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 28

FILE NAME = Black @ 129th Infantry ADA.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
5388.800	PLOT SCALE = 1:10	DRAWN - ZCW	REVISED -
Default	PLOT DATE = 8/20/2020	CHECKED - DPB	REVISED -
		DATE - 8/21/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

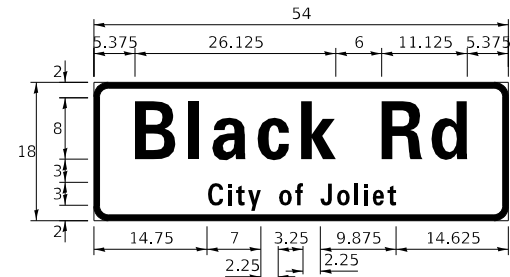
**ADA GRADING PLAN
BLACK ROAD AT 129TH INFANTRY DRIVE**

SCALE: 1"=5' SHEET OF SHEETS STA. TO STA.

F.A.U. RTE. 298	SECTION 18-00517-00-TL	COUNTY WILL	TOTAL SHEETS 72	SHEET NO. 28
CONTRACT NO. 61G36			ILLINOIS FED. AID PROJECT	

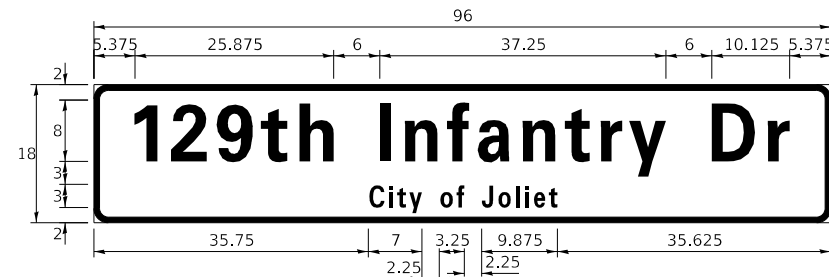
INTERNALLY ILLUMINATED LED

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	6.75	1	ZZ	2

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



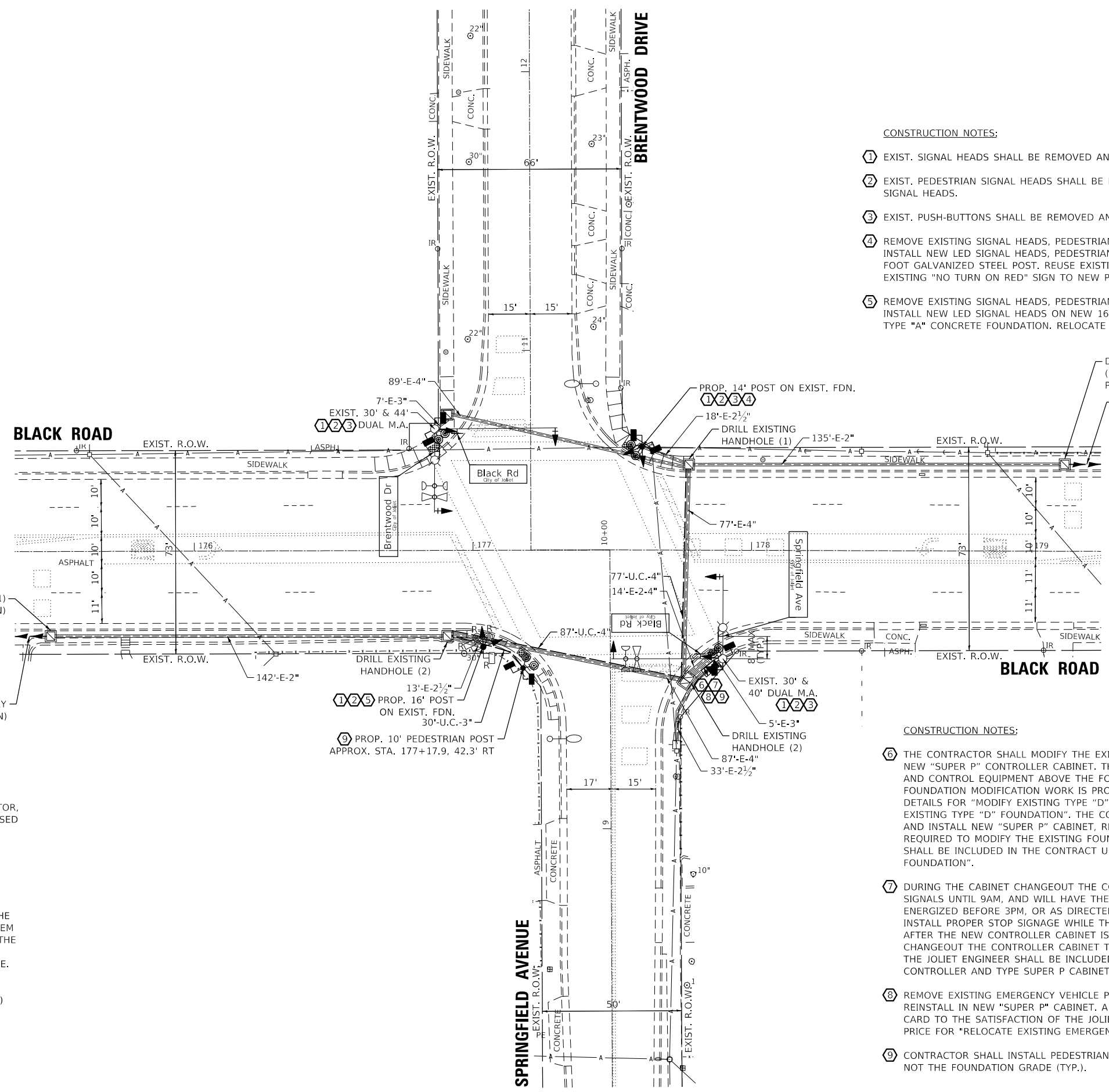
DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	12	2	ZZ	2

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
EARTH EXCAVATION	CU YD	5
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	175
DETECTABLE WARNINGS	SQ FT	16
SIDEWALK REMOVAL	SQ FT	150
REMOVE SIGN PANEL - TYPE 1	SQ FT	37.5
THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	335
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	842
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	724
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
PEDESTRIAN PUSH-BUTTON	EACH	8
MODIFY EXISTING CONTROLLER	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	6
ELECTRIC CABLE IN CONDUIT, STREET NAME SIGN, NO. 14 3C, TYPE SOOW	FOOT	742
CURB REMOVAL AND REPLACEMENT	FOOT	17
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1

FILE NAME = Black @ 129th Infantry Sign.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
5388.800	PLOT SCALE = 1:40	DRAWN - ZCW	REVISED -
Default	PLOT DATE = 8/20/2020	CHECKED - DPB	REVISED -
		DATE - 8/21/2020	REVISED -

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	29
CONTRACT NO. 61G36			ILLINOIS FED. AID PROJECT	



CONSTRUCTION NOTES:

- ① EXIST. SIGNAL HEADS SHALL BE REMOVED AND REPLACED WITH NEW LED SIGNAL HEADS.
- ② EXIST. PEDESTRIAN SIGNAL HEADS SHALL BE REMOVED AND REPLACED WITH NEW LED PEDESTRIAN SIGNAL HEADS.
- ③ EXIST. PUSH-BUTTONS SHALL BE REMOVED AND REPLACED WITH NEW PUSH-BUTTONS.
- ④ REMOVE EXISTING SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, PUSH-BUTTONS AND 14 FOOT POST. INSTALL NEW LED SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, AND PUSH-BUTTONS ON NEW 14 FOOT GALVANIZED STEEL POST. REUSE EXISTING TYPE "A" CONCRETE FOUNDATION. RELOCATE EXISTING "NO TURN ON RED" SIGN TO NEW POST.
- ⑤ REMOVE EXISTING SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, PUSH-BUTTONS AND 16 FOOT POST. INSTALL NEW LED SIGNAL HEADS ON NEW 16 FOOT GALVANIZED STEEL POST. REUSE EXISTING TYPE "A" CONCRETE FOUNDATION. RELOCATE EXISTING "NO TURN ON RED" SIGN TO NEW POST.

DRILL EXISTING HANDHOLE (1)
(SEE PERM. INTERCONNECT PLAN)

PROP. INTERCONNECT TO IL 7 (LARKIN AVE)
(SEE PERM. INTERCONNECT PLAN)

DRILL EXISTING HANDHOLE (1)
(SEE PERM. INTERCONNECT PLAN)

PROP. INTERCONNECT TO 129TH INFANTRY DRIVE
(SEE PERM. INTERCONNECT PLAN)

CONSTRUCTION NOTES:

- ⑥ THE CONTRACTOR SHALL MODIFY THE EXISTING CONTROLLER FOUNDATION TO ACCOMMODATE THE NEW "SUPER P" CONTROLLER CABINET. THE CONTRACTOR SHALL SUPPORT THE EXISTING CABINET AND CONTROL EQUIPMENT ABOVE THE FOUNDATION TO KEEP THE SIGNAL FUNCTIONING WHILE THE FOUNDATION MODIFICATION WORK IS PROCEEDING, AS DESCRIBED IN THE STANDARD IDOT DESIGN DETAILS FOR "MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION" AND "MODIFY EXISTING TYPE "D" FOUNDATION". THE CONTRACTOR SHALL THEN REMOVE THE EXISTING CABINET AND INSTALL NEW "SUPER P" CABINET, REUSING THE EXISTING CABLES AND CONDUIT. ALL WORK REQUIRED TO MODIFY THE EXISTING FOUNDATION TO THE SATISFACTION OF THE JOLIET ENGINEER SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "MODIFY EXISTING CONTROLLER FOUNDATION".
- ⑦ DURING THE CABINET CHANGEOUT THE CONTRACTOR SHALL NOT DEACTIVATE THE TRAFFIC SIGNALS UNTIL 9AM, AND WILL HAVE THE NEW CABINET OPERATIONAL AND THE TRAFFIC SIGNAL ENERGIZED BEFORE 3PM, OR AS DIRECTED BY THE JOLIET ENGINEER. THE CONTRACTOR SHALL INSTALL PROPER STOP SIGNAGE WHILE THE INTERSECTION IS DARK, AND REMOVE THE SIGNAGE AFTER THE NEW CONTROLLER CABINET IS ENERGIZED. ALL WORK AND MATERIALS REQUIRED TO CHANGEOUT THE CONTROLLER CABINET TO A NEW "SUPER P" CABINET TO THE SATISFACTION OF THE JOLIET ENGINEER SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)".
- ⑧ REMOVE EXISTING EMERGENCY VEHICLE PREEMPTION CARD FROM EXISTING CABINET AND REINSTALL IN NEW "SUPER P" CABINET. ALL WORK REQUIRED TO RELOCATE THE EXISTING EVP CARD TO THE SATISFACTION OF THE JOLIET ENGINEER SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT".
- ⑨ CONTRACTOR SHALL INSTALL PEDESTRIAN PUSH-BUTTON AT 42" ABOVE THE SIDEWALK GRADE, NOT THE FOUNDATION GRADE (TYP.).

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTACTOR, SAFELY STORED, AND RELOCATED TO THE PROPOSED TRAFFIC SIGNAL CONTROLLER AND POST:

- 1 EACH LIGHT DETECTOR AMPLIFIER
- 2 EACH "NO TURN ON RED" SIGN

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE, THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 1 EACH CONTROLLER AND CABINET (COMPLETE)
- 8 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 2 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 4 EACH TRAFFIC SIGNAL BACKPLATE
- 8 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 8 EACH PEDESTRIAN PUSH-BUTTON
- 2 EACH TRAFFIC SIGNAL POST
- 4 EACH STREET NAME SIGN

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

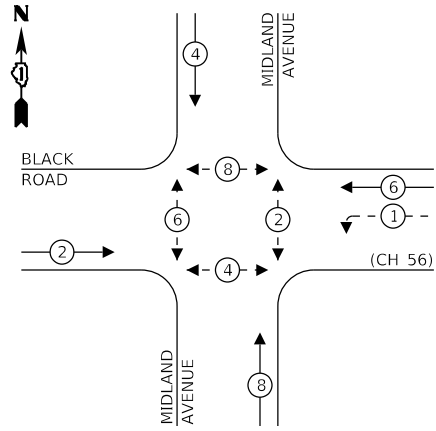
**TRAFFIC SIGNAL MODERNIZATION PLAN
BLACK ROAD AT BRENTWOOD DRIVE /SPRINGFIELD AVENUE**

JOLIET ECON 1

FILE NAME =	USER NAME = zwallsten	DESIGNED - DPB	REVISED -	SCALE: 1"=20'	SHEET OF SHEETS STA. TO STA.	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
Black @ Brentwood - Springfield Perm Signal.dgn		DRAWN - ZCW	REVISED -			298	18-00517-00-TL	WILL	72	30	
5388.800	PLOT SCALE = 1:40	CHECKED - DPB	REVISED -			CONTRACT NO. 61G36					
Default	PLOT DATE = 8/20/2020	DATE - 8/21/2020	REVISED -			ILLINOIS FED. AID PROJECT					

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 30

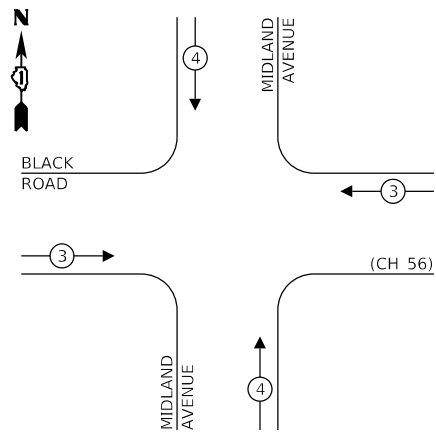
EXISTING CONTROLLER SEQUENCE



LEGEND:

- ← * → PROTECTED PHASE
- ← - * - → PROTECTED/PERMITTED PHASE
- ← * → PEDESTRIAN PHASE
- ← * → OL OVERLAP

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	10	11	50	55
(YELLOW)	10	20	5	10
(GREEN)	10	12	45	54
PERMISSIVE ARROW	4	10	10	4
PED. SIGNAL	8	20	100	160
CONTROLLER	1	100	100	100
UPS	1	25	100	25
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	2	250	50	250
TOTAL =				658

ENERGY COSTS TO:

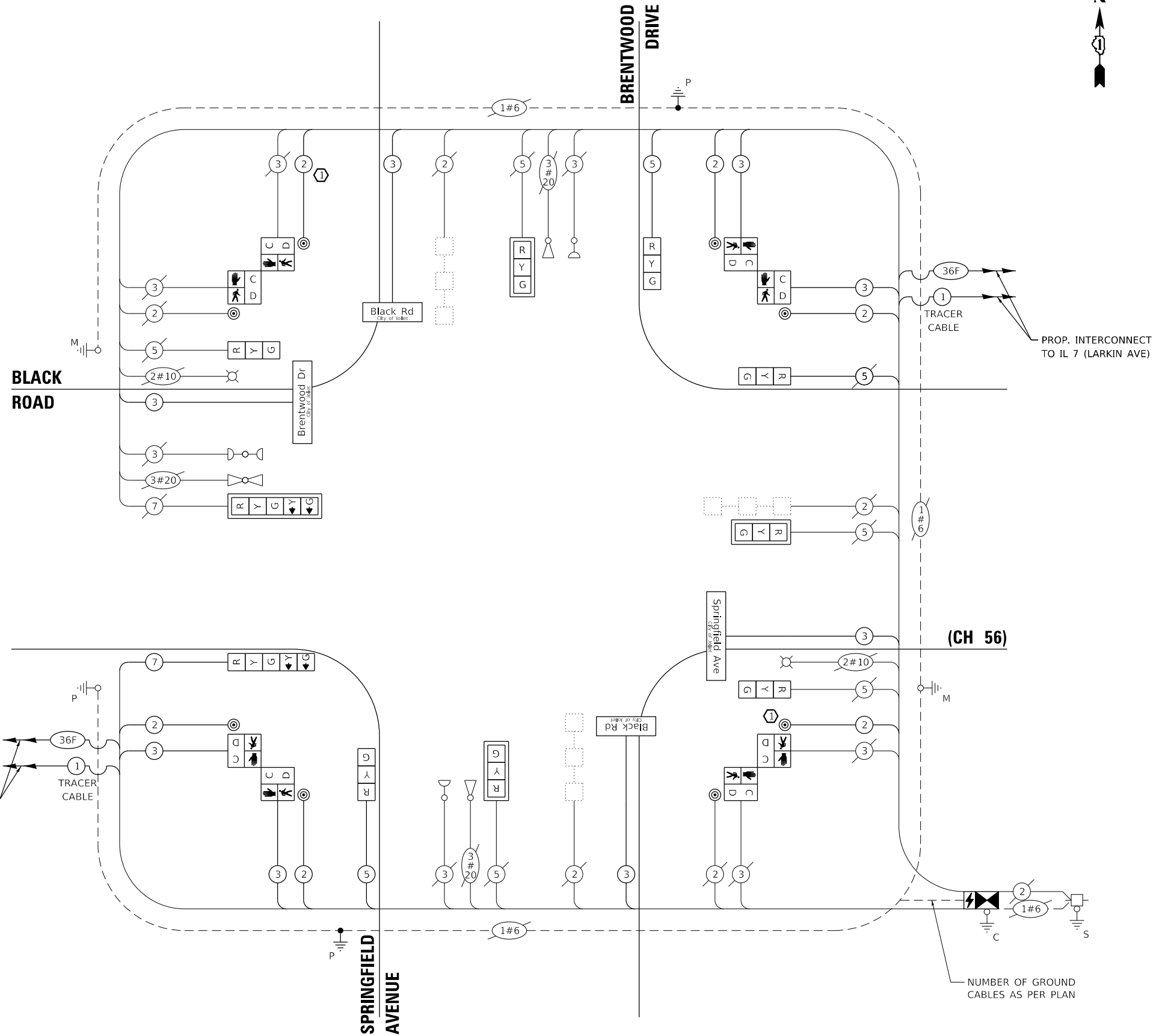
CITY OF JOLIET
150 W. JEFFERSON STREET
JOLIET, IL 60432-1148

ENERGY SUPPLY: CONTACT: TIM COSLET
PHONE: (815) 724-5010
COMPANY: COM-ED
ACCOUNT NUMBER: -

CONSTRUCTION NOTE:

- ① MAST ARM CURRENTLY HAS ONE PEDESTRIAN PUSH-BUTTON. THE CONTRACTOR SHALL INSTALL A SECOND PUSH-BUTTON, WITH A NEW 2 CONDUCTOR CABLE.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.



CABLE PLAN
(NOT TO SCALE)

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 31

FILE NAME =	USER NAME = zwallsten
Black @ Brentwood - Springfield Perm Cable.dgn	
5388.800	
Default	
PLOT SCALE = 1:40	
PLOT DATE = 8/20/2020	

DESIGNED - DPB	REVISED -
DRAWN - ZCW	REVISED -
CHECKED - DPB	REVISED -
DATE - 8/21/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CABLE PLAN, PHASE DESIGNATION DIAGRAM,
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
BLACK ROAD AT BRENTWOOD DRIVE /SPRINGFIELD AVENUE**

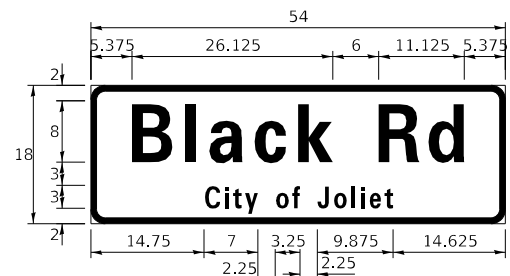
SCALE: None SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	31
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				

JOLIET ECON 1

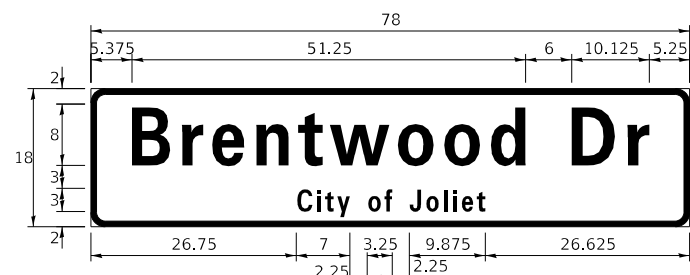
INTERNALLY ILLUMINATED LED

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE

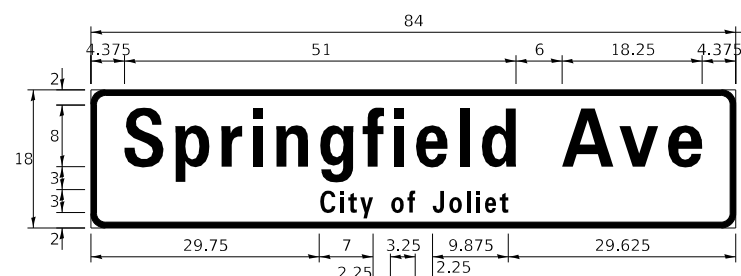


DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	6.75	1	ZZ	2

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	9.75	1	ZZ	1



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	10.5	1	ZZ	1

NOTE: FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS DETAIL.

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
REMOVE SIGN PANEL - TYPE 2	SQ FT	35
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	30
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	164
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	869
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	648
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	458
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	156
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1
DRILL EXISTING HANDHOLE	EACH	5
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	3
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	5
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	4
PEDESTRIAN PUSH-BUTTON	EACH	8
RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	1
MODIFY EXISTING CONTROLLER FOUNDATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	1
PEDESTRIAN SIGNAL POST, 10 FT.	EACH	1
ELECTRIC CABLE IN CONDUIT, STREET NAME SIGN, NO. 14 3C, TYPE SOOW	FOOT	586
RELOCATE EXISTING SIGNS	EACH	2
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
CONCRETE FOUNDATION, TYPE A 10-INCH DIAMETER	FOOT	4

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 32

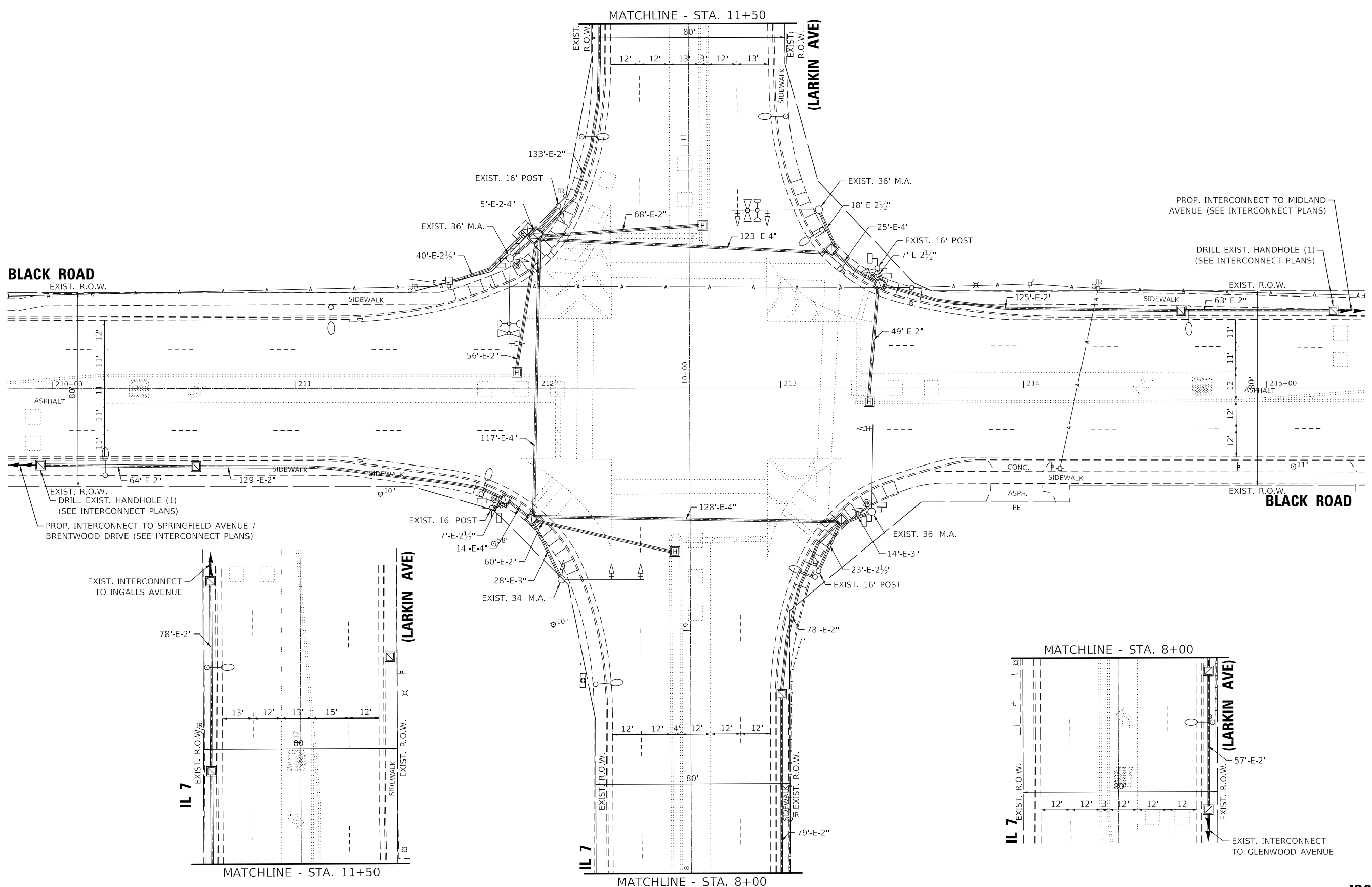
FILE NAME = Black @ Brentwood - Springfield Sign.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
5388.800	PLOT SCALE = 1:40	DRAWN - ZCW	REVISED -
Default	PLOT DATE = 8/20/2020	CHECKED - DPB	REVISED -
		DATE - 8/21/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**L.E.D. ILLUMINATED MAST ARM MOUNTED STREET NAME SIGNS
AND SCHEDULE OF QUANTITIES
BLACK ROAD AT BRENTWOOD DRIVE /SPRINGFIELD AVENUE**

F.A.U. RTE. 298	SECTION 18-00517-00-TL	COUNTY WILL	TOTAL SHEETS 72	SHEET NO. 32
CONTRACT NO. 61G36			ILLINOIS FED. AID PROJECT	

JOLIET ECON 1



GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 33

FILE NAME =	USER NAME = zwallsten
Black @ Larkin Perm Signal.dgn	
5388.800	
Default	

DESIGNED - DPB	REVISED -
DRAWN - ZCW	REVISED -
CHECKED - DPB	REVISED -
DATE - 8/21/2020	REVISED -

DESIGNED - DPB	REVISED -
DRAWN - ZCW	REVISED -
CHECKED - DPB	REVISED -
DATE - 8/21/2020	REVISED -

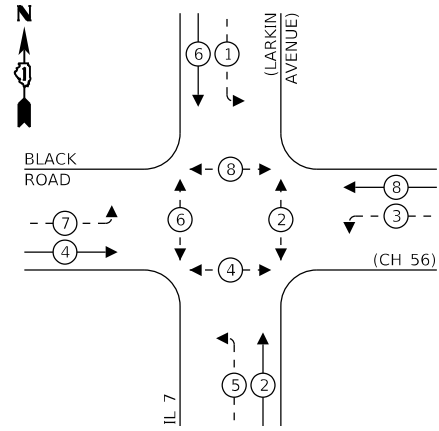
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TRAFFIC SIGNAL MODERNIZATION PLAN			
BLACK ROAD AT IL 7 (LARKIN AVE)			
SCALE: 1"=20'	SHEET	OF SHEETS	STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	33
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				

**IDOT ECON 125
TS 22524**

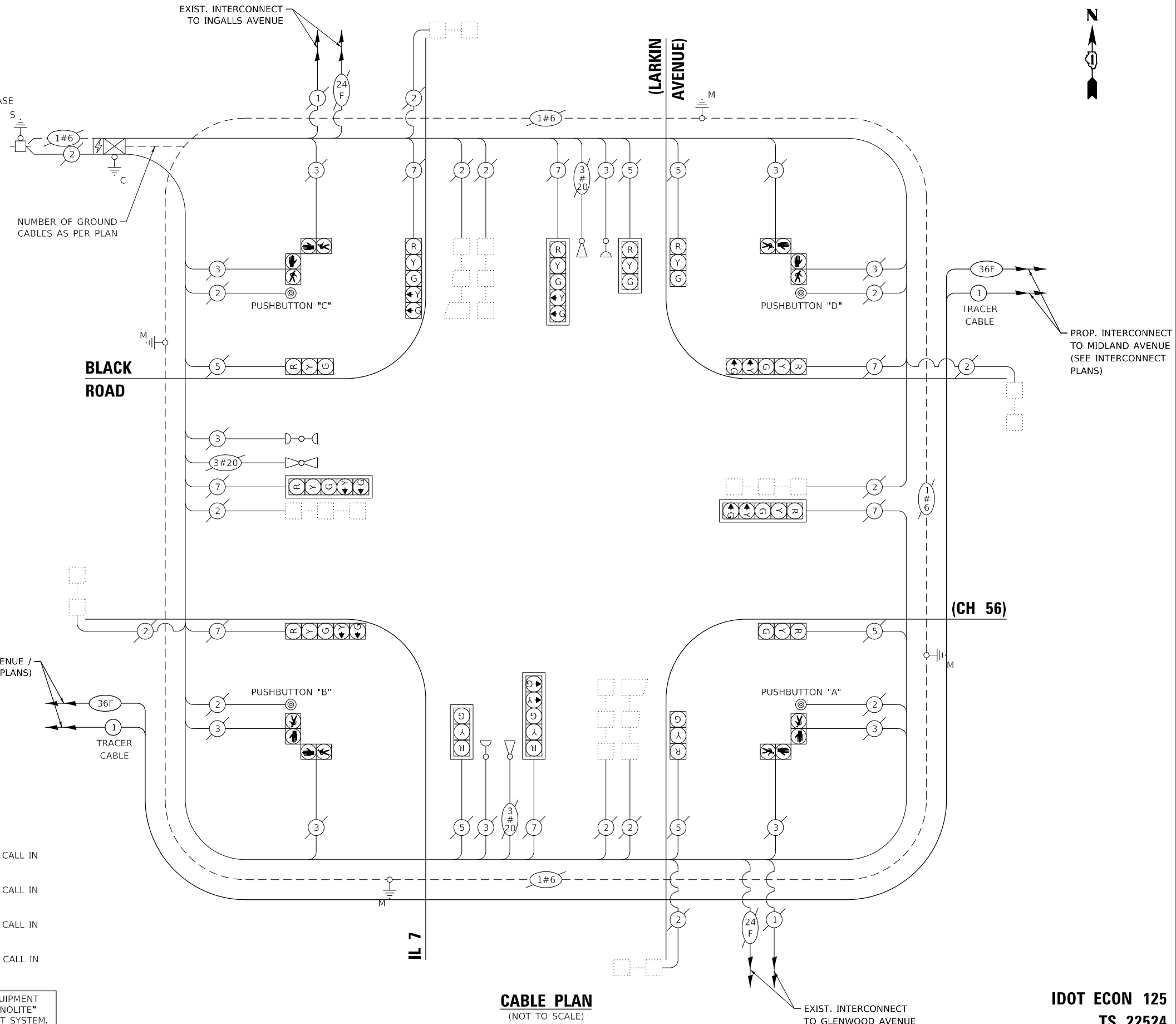
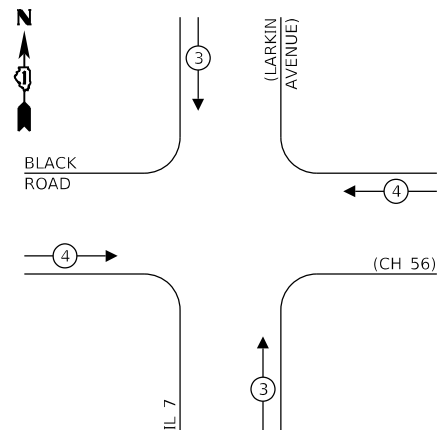
EXISTING CONTROLLER SEQUENCE



LEGEND:

- ← * → PROTECTED PHASE
- ← * - - PROTECTED/PERMITTED PHASE
- ← * → PEDESTRIAN PHASE
- ← * → OL OVERLAP

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROP. INTERCONNECT TO SPRINGFIELD AVENUE / BRENTWOOD DRIVE (SEE INTERCONNECT PLANS)

PROP. INTERCONNECT TO MIDLAND AVENUE (SEE INTERCONNECT PLANS)

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	13	11	50	71.5
(YELLOW)	13	20	5	13
(GREEN)	13	12	45	70.2
PERMISSIVE ARROW	14	10	10	14
PED. SIGNAL	8	20	100	160
CONTROLLER	1	100	100	100
UPS	1	25	100	25
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	250	50	-
TOTAL =				453.7

NOTE:
 PUSH BUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4.
 PUSH BUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6.
 PUSH BUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8.
 PUSH BUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

CABLE PLAN
(NOT TO SCALE)

IDOT ECON 125
TS 22524

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 34

ENERGY COSTS TO:
 CITY OF JOLIET
 150 W. JEFFERSON STREET
 JOLIET, IL 60432-1148
 ENERGY SUPPLY: CONTACT: TIM COSLET
 PHONE: (815) 724-5010
 COMPANY: COM-ED
 ACCOUNT NUMBER: -

FILE NAME = Black @ Larkin Perm Cable.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
5388.800	PLOT SCALE = 1:40	DRAWN - ZCW	REVISED -
Default	PLOT DATE = 8/21/2020	CHECKED - DPB	REVISED -
		DATE - 8/21/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
BLACK ROAD AT IL 7 (LARKIN AVE)

SCALE: None SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	34
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1

**IDOT ECON 125
 TS 22524**

FILE NAME =	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
Black @ Larkin Sign.dgn		DRAWN - ZCW	REVISED -
5388.800	PLOT SCALE = 1:40	CHECKED - DPB	REVISED -
Default	PLOT DATE = 8/20/2020	DATE - 8/21/2020	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

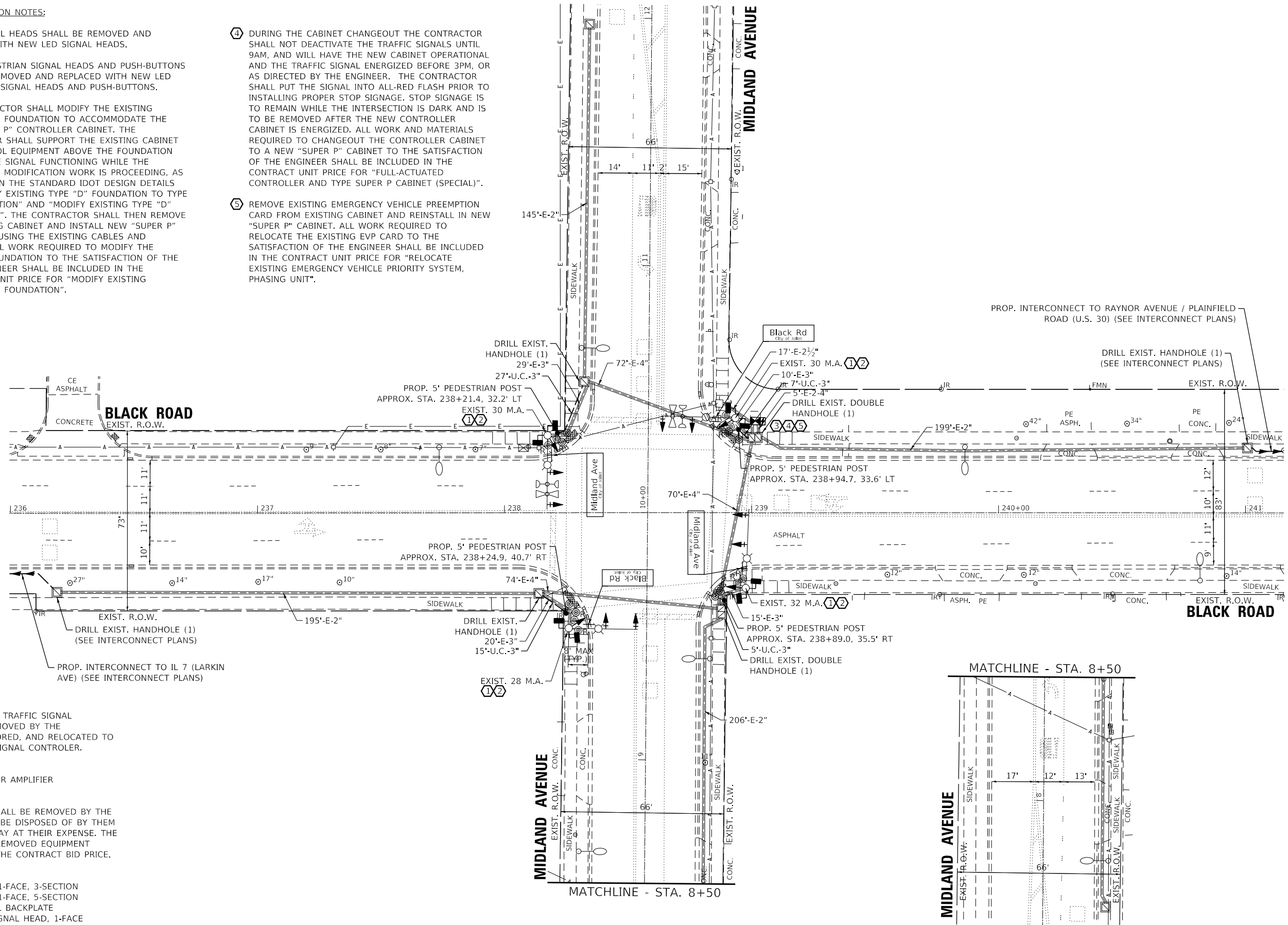
**SCHEDULE OF QUANTITIES
 BLACK ROAD AT IL 7 (LARKIN AVE)**

SCALE: None SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	35
			CONTRACT NO. 61G36	
ILLINOIS		FED. AID PROJECT		

CONSTRUCTION NOTES:

- ① EXIST. SIGNAL HEADS SHALL BE REMOVED AND REPLACED WITH NEW LED SIGNAL HEADS.
- ② EXIST. PEDESTRIAN SIGNAL HEADS AND PUSH-BUTTONS SHALL BE REMOVED AND REPLACED WITH NEW LED PEDESTRIAN SIGNAL HEADS AND PUSH-BUTTONS.
- ③ THE CONTRACTOR SHALL MODIFY THE EXISTING CONTROLLER FOUNDATION TO ACCOMMODATE THE NEW "SUPER P" CONTROLLER CABINET. THE CONTRACTOR SHALL SUPPORT THE EXISTING CABINET AND CONTROL EQUIPMENT ABOVE THE FOUNDATION TO KEEP THE SIGNAL FUNCTIONING WHILE THE FOUNDATION MODIFICATION WORK IS PROCEEDING, AS DESCRIBED IN THE STANDARD IDOT DESIGN DETAILS FOR "MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION" AND "MODIFY EXISTING TYPE "D" FOUNDATION". THE CONTRACTOR SHALL THEN REMOVE THE EXISTING CABINET AND INSTALL NEW "SUPER P" CABINET, REUSING THE EXISTING CABLES AND CONDUIT. ALL WORK REQUIRED TO MODIFY THE EXISTING FOUNDATION TO THE SATISFACTION OF THE JOLIET ENGINEER SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "MODIFY EXISTING CONTROLLER FOUNDATION".
- ④ DURING THE CABINET CHANGEOUT THE CONTRACTOR SHALL NOT DEACTIVATE THE TRAFFIC SIGNALS UNTIL 9AM, AND WILL HAVE THE NEW CABINET OPERATIONAL AND THE TRAFFIC SIGNAL ENERGIZED BEFORE 3PM, OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL PUT THE SIGNAL INTO ALL-RED FLASH PRIOR TO INSTALLING PROPER STOP SIGNAGE. STOP SIGNAGE IS TO REMAIN WHILE THE INTERSECTION IS DARK AND IS TO BE REMOVED AFTER THE NEW CONTROLLER CABINET IS ENERGIZED. ALL WORK AND MATERIALS REQUIRED TO CHANGEOUT THE CONTROLLER CABINET TO A NEW "SUPER P" CABINET TO THE SATISFACTION OF THE ENGINEER SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)".
- ⑤ REMOVE EXISTING EMERGENCY VEHICLE PREEMPTION CARD FROM EXISTING CABINET AND REINSTALL IN NEW "SUPER P" CABINET. ALL WORK REQUIRED TO RELOCATE THE EXISTING EVP CARD TO THE SATISFACTION OF THE ENGINEER SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT".



THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SAFELY STORED, AND RELOCATED TO THE PROPOSED TRAFFIC SIGNAL CONTROLER.

- 1 EACH LIGHT DETECTOR AMPLIFIER

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

- 10 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 2 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 8 EACH TRAFFIC SIGNAL BACKPLATE
- 8 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 8 EACH PEDESTRIAN PUSH-BUTTON
- 4 EACH STREET NAME SIGN

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 36

FILE NAME =	USER NAME = zwallsten
Black @ Midland Perm Signal.dgn	
5388.800	
Default	

PLOT SCALE = 1:40	CHECKED - DPB	DATE - 8/21/2020
PLOT DATE = 8/20/2020	DESIGNED - DPB	REVISOR -
	DRAWN - ZCW	REVISIONS -
	REVISIONS -	

DESIGNED - DPB	REVISOR -
DRAWN - ZCW	REVISIONS -
CHECKED - DPB	REVISIONS -
DATE - 8/21/2020	REVISIONS -

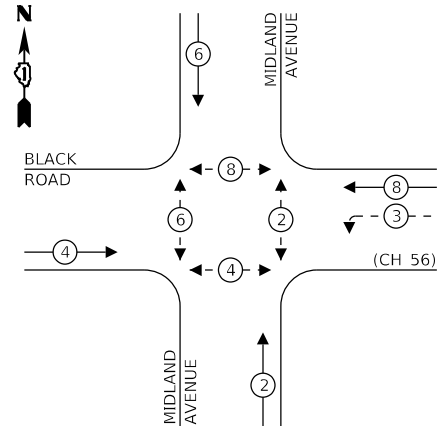
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODERNIZATION PLAN
BLACK ROAD AT MIDLAND AVENUE**

SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	36
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				

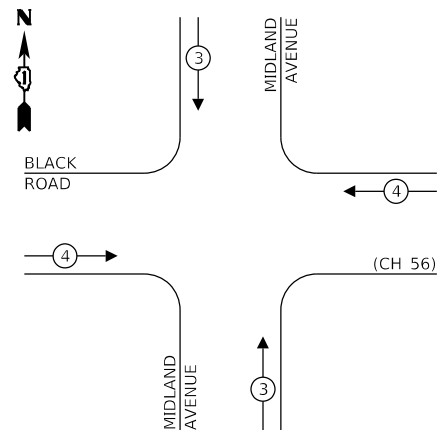
EXISTING CONTROLLER SEQUENCE



LEGEND:

- ← * → PROTECTED PHASE
- ← * - - PROTECTED/PERMITTED PHASE
- ← * → PEDESTRIAN PHASE
- ← * → OL OVERLAP

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE



TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

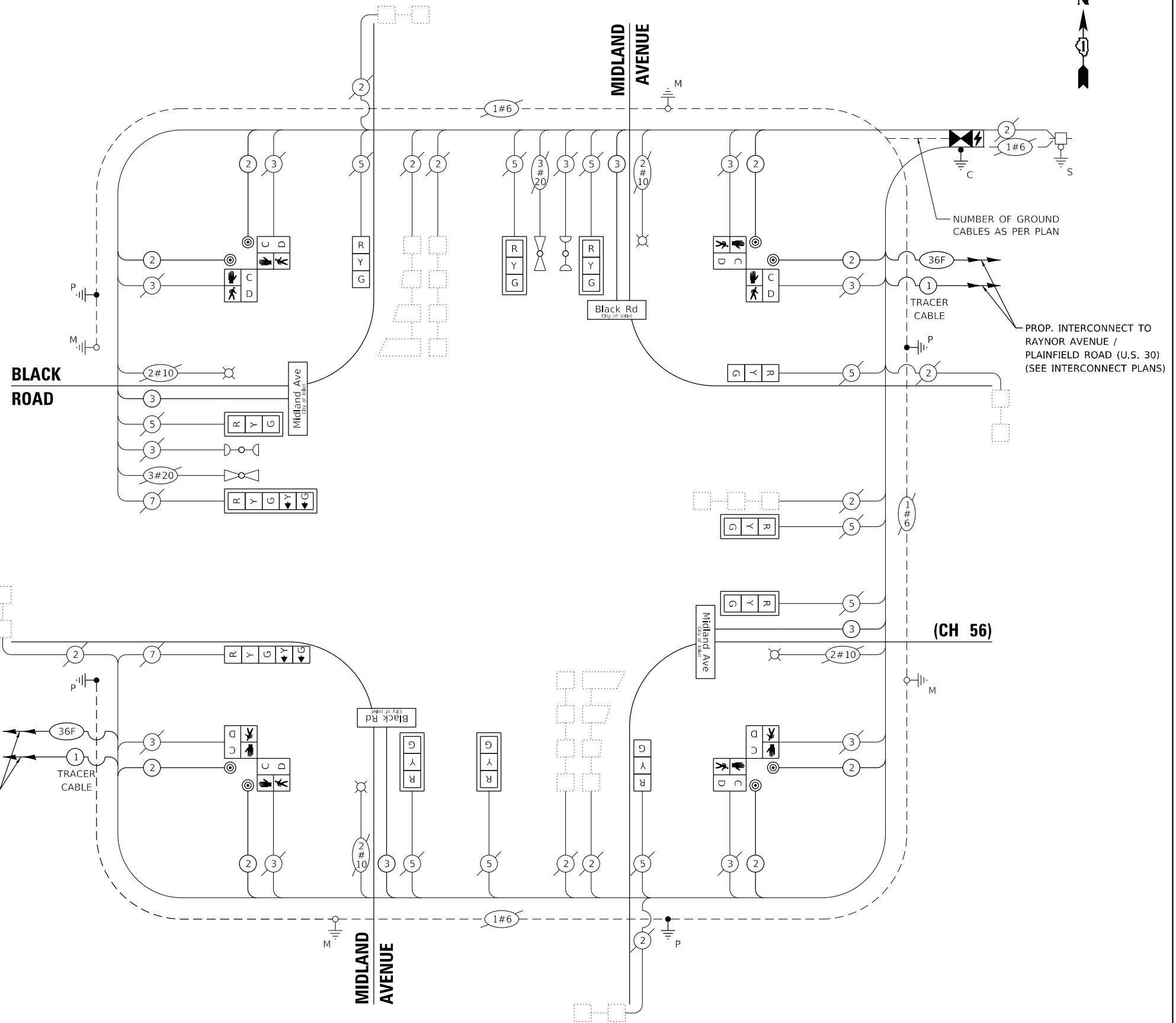
TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	11	50	66
(YELLOW)	12	20	5	12
(GREEN)	12	12	45	64.8
PERMISSIVE ARROW	4	10	10	4
PED. SIGNAL	8	20	100	160
CONTROLLER	1	100	100	100
UPS	1	25	100	25
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	4	120	50	240
LUMINAIRE	4	250	50	500
TOTAL =				1,171.8

ENERGY COSTS TO:

CITY OF JOLIET
150 W. JEFFERSON STREET
JOLIET, IL 600432-1148

ENERGY SUPPLY: CONTACT: TIM COSLET
PHONE: (815) 724-5010
COMPANY: COM-ED
ACCOUNT NUMBER: -

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.



CABLE PLAN
(NOT TO SCALE)

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 37

FILE NAME = Black @ Midland Perm Cable.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
5388.800	PLOT SCALE = 1:40	DRAWN - ZCW	REVISED -
Default	PLOT DATE = 8/20/2020	CHECKED - DPB	REVISED -
		DATE - 8/21/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CABLE PLAN, PHASE DESIGNATION DIAGRAM,
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
BLACK ROAD AT MIDLAND AVENUE**

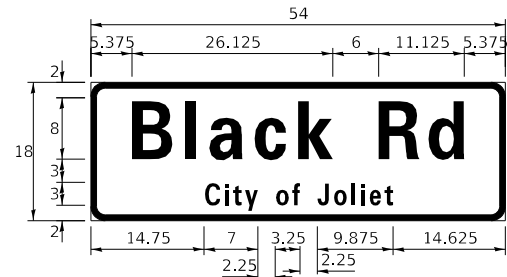
SCALE: None SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	37
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				

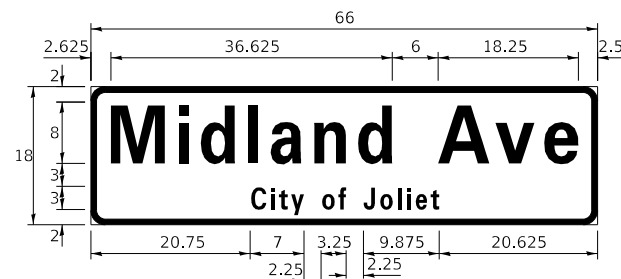
JOLIET ECON 1

INTERNALLY ILLUMINATED LED

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	6.75	1	ZZ	2



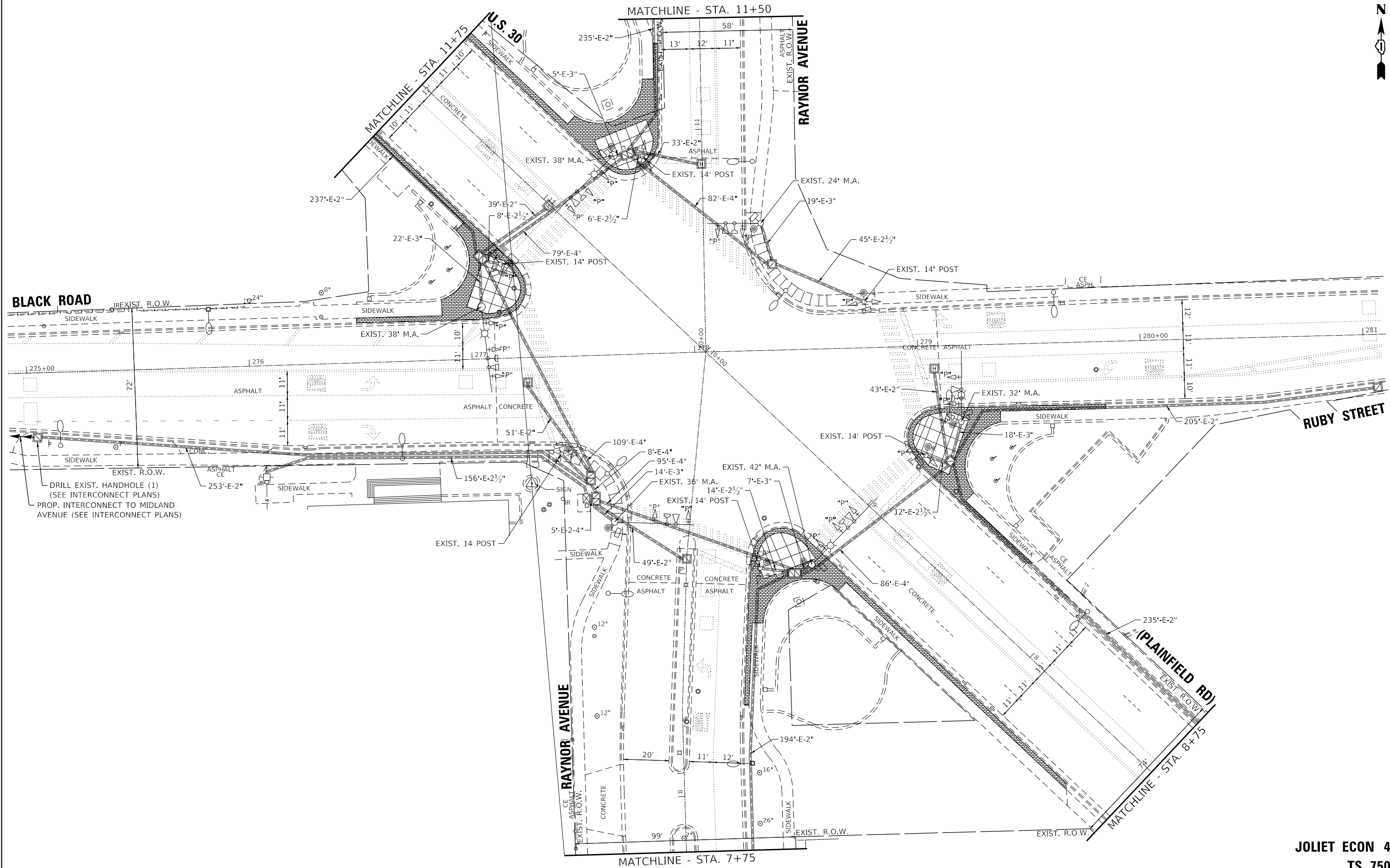
DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D	8.25	1	ZZ	2

NOTE: FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS DETAIL.

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
REMOVE SIGN PANEL - TYPE 1	SQ FT	30
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	54
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1,026
DRILL EXISTING HANDHOLE	EACH	4
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	7
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	8
PEDESTRIAN PUSH-BUTTON	EACH	8
RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	1
MODIFY EXISTING CONTROLLER FOUNDATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
FULL-ACTUATED CONTROLLER AND TYPE SUPER P CABINET (SPECIAL)	EACH	1
PEDESTRIAN SIGNAL POST, 5 FT.	EACH	4
ELECTRIC CABLE IN CONDUIT, STREET NAME SIGN, NO. 14 3C, TYPE SOOW	FOOT	621
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
CONCRETE FOUNDATION, TYPE A 10-INCH DIAMETER	FOOT	16

FILE NAME = Black @ Midland Sign.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
5388.800	PLOT SCALE = 1:40	DRAWN - ZCW	REVISED -
Default	PLOT DATE = 8/20/2020	CHECKED - DPB	REVISED -
		DATE - 8/21/2020	REVISED -



GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 39

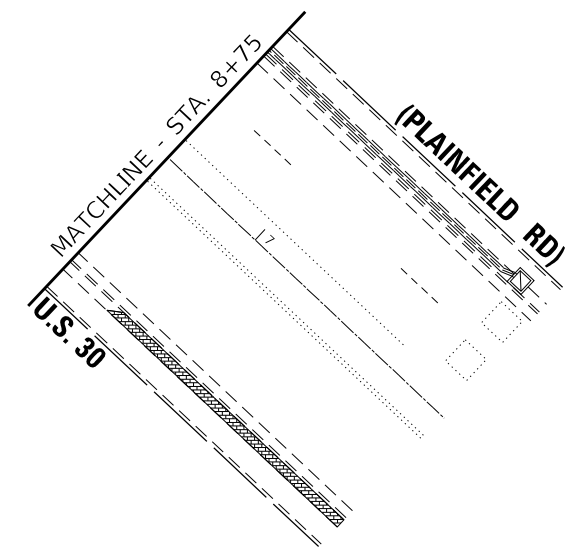
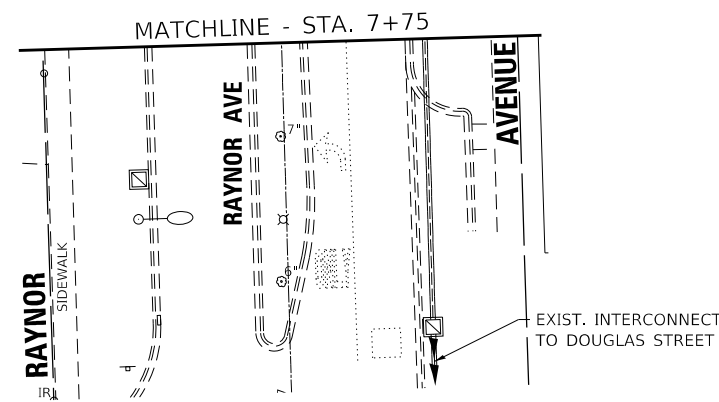
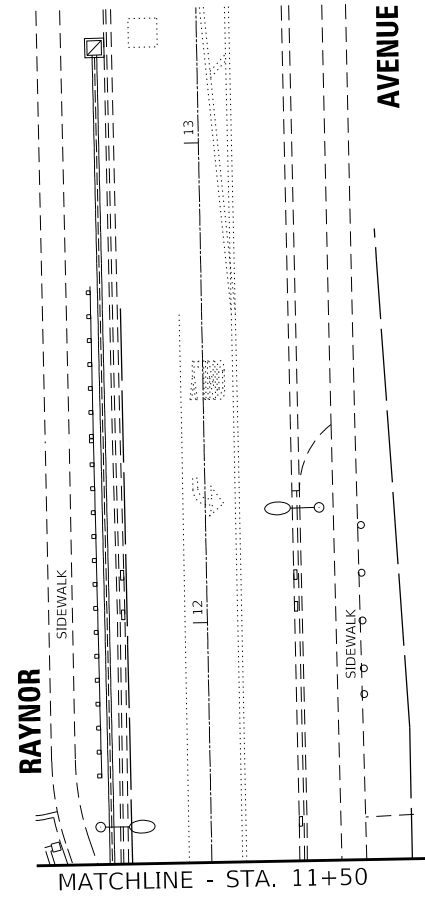
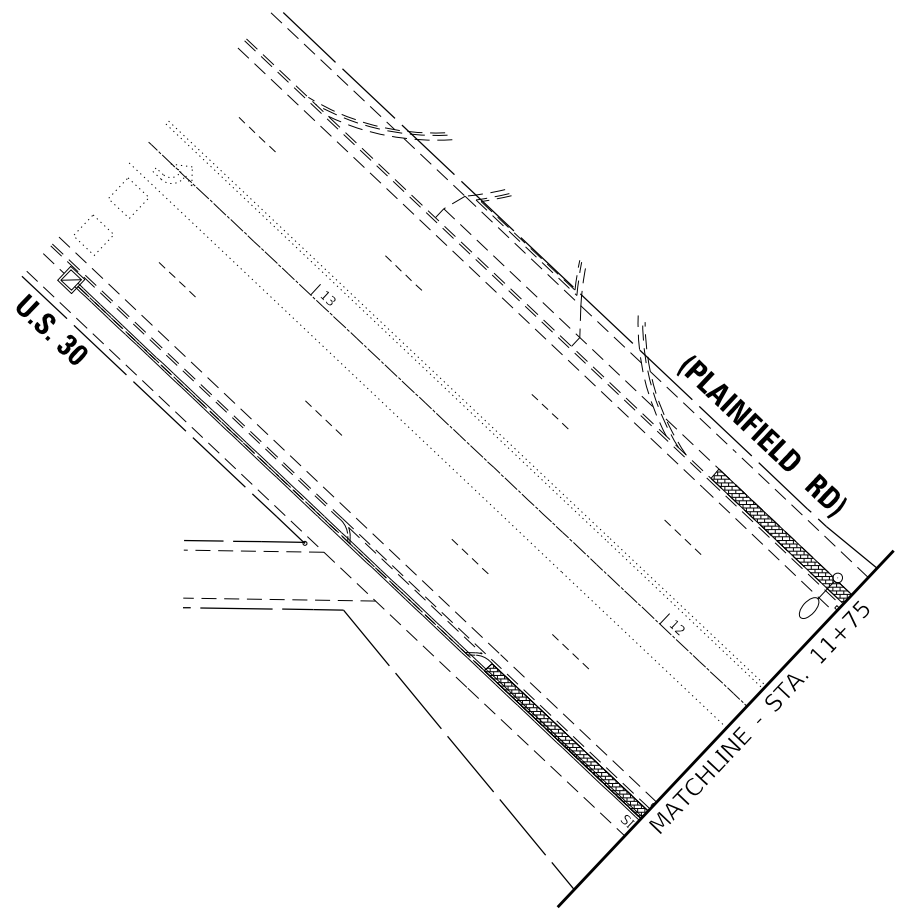
JOLIET ECON 47
TS 7507

FILE NAME =	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
Black - Ruby @ Raynor - Plainfield Perm Signal		DRAWN - ZCW	REVISED -
5388.800	PLOT SCALE = 1:40	CHECKED - DPB	REVISED -
Default	PLOT DATE = 8/20/2020	DATE - 8/21/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN
BLACK RD /RUBY ST AT RAYNOR AVE /U.S. 30 (PLAINFIELD RD)
 SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	39
ILLINOIS FED. AID PROJECT			CONTRACT NO. 61G36	



**JOLIET ECON 47
TS 7507**

FILE NAME = Black - Ruby @ Raynor - Plainfield Perm Signal.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
5388.800	PLOT SCALE = 1:40	DRAWN - ZCW	REVISED -
Sheet 2	PLOT DATE = 8/20/2020	CHECKED - DPB	REVISED -
		DATE - 8/21/2020	REVISED -

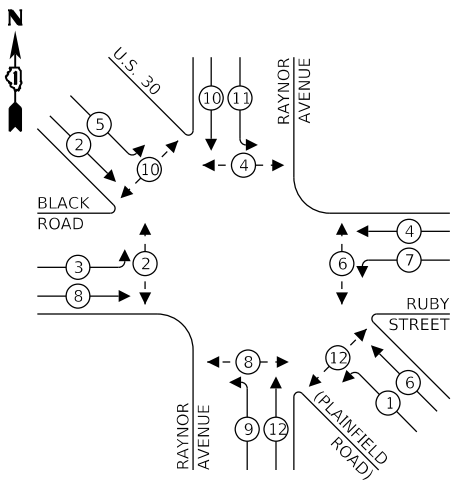
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODERNIZATION PLAN
BLACK RD /RUBY ST AT RAYNOR AVE /U.S. 30 (PLAINFIELD RD)**

SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	40
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				

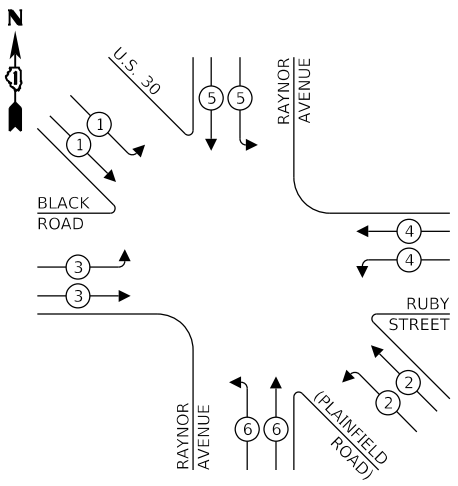
EXISTING CONTROLLER SEQUENCE



LEGEND:

- ← * → PROTECTED PHASE
- ← * - - * → PROTECTED/PERMITTED PHASE
- ← * → PEDESTRIAN PHASE
- ← * OL → OVERLAP

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE

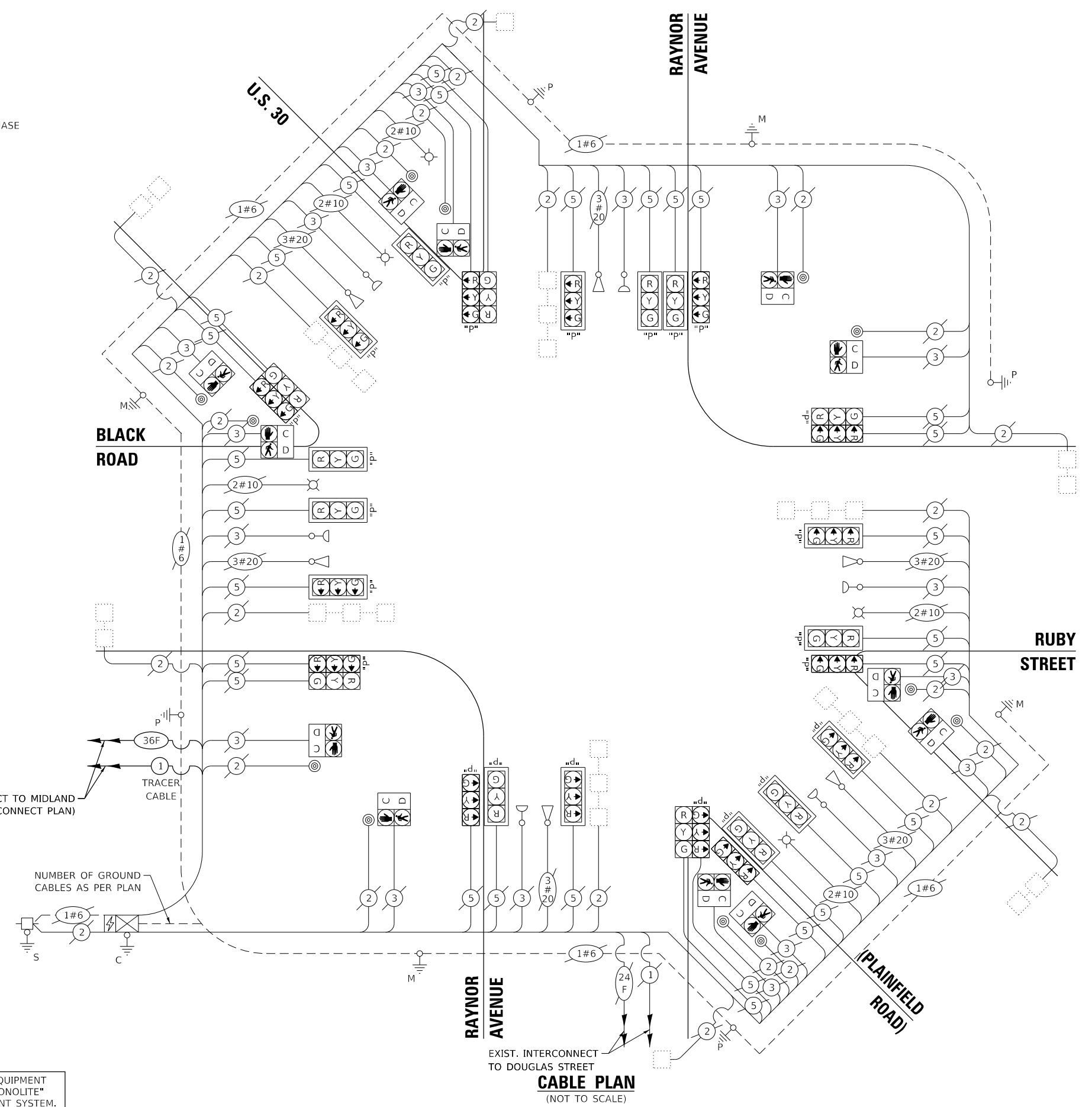


TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	29	11	50	159.5
(YELLOW)	29	20	5	116
(GREEN)	29	12	45	156.6
PERMISSIVE ARROW	-	10	10	-
PED. SIGNAL	12	20	100	240
CONTROLLER	1	100	100	100
UPS	1	25	100	25
VIDEO SYSTEM	-	150	100	-
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	4	250	50	500
TOTAL =				1,297.1

ENERGY COSTS TO:
 CITY OF JOLIET
 150 W. JEFFERSON STREET
 JOLIET, IL 600432-1148
 ENERGY SUPPLY: CONTACT: TIM COSLET
 PHONE: (815) 724-5010
 COMPANY: COM-ED
 ACCOUNT NUMBER: -

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.



CABLE PLAN
(NOT TO SCALE)

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 41

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

**CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 BLACK RD / RUBY ST AT RAYNOR AVE / U.S. 30 (PLAINFIELD RD)**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	41
CONTRACT NO. 61G36			ILLINOIS FED. AID PROJECT	

**JOLIET ECON 47
 TS 7507**

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1

**JOLIET ECON 47
TS 7507**

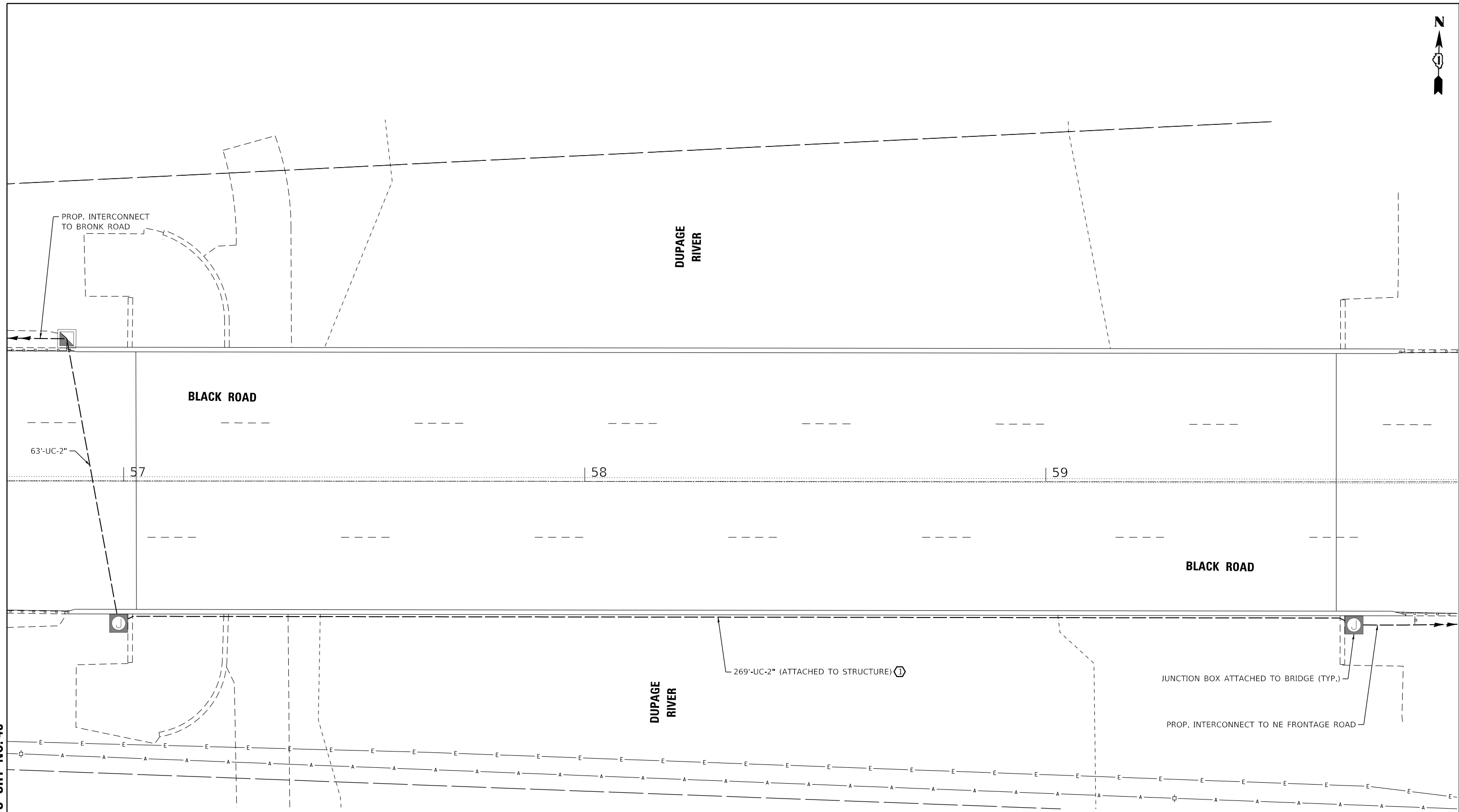
FILE NAME = Black - Ruby @ Raynor - Plainfield Sign.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
5388.800	PLOT SCALE = 1:40	CHECKED - DPB	REVISED -
Default	PLOT DATE = 8/20/2020	DATE - 8/21/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES
BLACK RD /RUBY ST AT RAYNOR AV /PLAINFIELD RD /U.S. 30**

SCALE: None SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	42
CONTRACT NO. 61G36				
ILLINOIS		FED. AID PROJECT		



GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 43

**SN: 099-3031
BLACK ROAD OVER DuPAGE RIVER**

CONSTRUCTION NOTES:

- ① THE CONTRACTOR SHALL ATTACH CONDUIT TO THE OUTSIDE FACE OF PARAPET USING EXPANSION ANCHORS AND CONDUIT BRACKETS.

FILE NAME = Junction EXHB - DuPageRiver.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
5388.800	PLOT SCALE = 1:20	DRAWN - ZCW	REVISED -
Default	PLOT DATE = 8/20/2020	CHECKED - DPB	REVISED -
		DATE - 8/21/2020	REVISED -

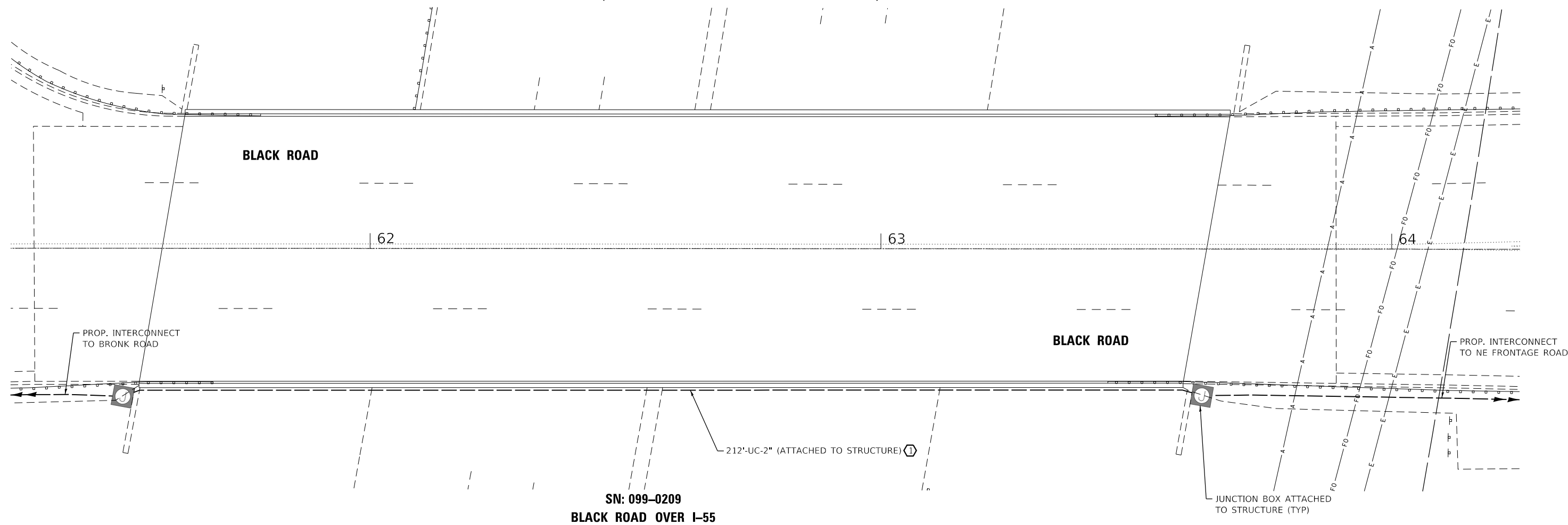
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

INTERCONNECT JUNCTION BOX PLAN BLACK ROAD AT DuPAGE RIVER BRIDGE	
SCALE: 1"=10'	SHEET 1 OF 3 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	43
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				



I 55 (BARACK OBAMA PRESIDENTIAL EXPRESSWAY)



CONSTRUCTION NOTES:

- ① THE CONTRACTOR SHALL ATTACH CONDUIT TO THE OUTSIDE FACE OF PARAPET USING EXPANSION ANCHORS AND CONDUIT BRACKETS.

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 44

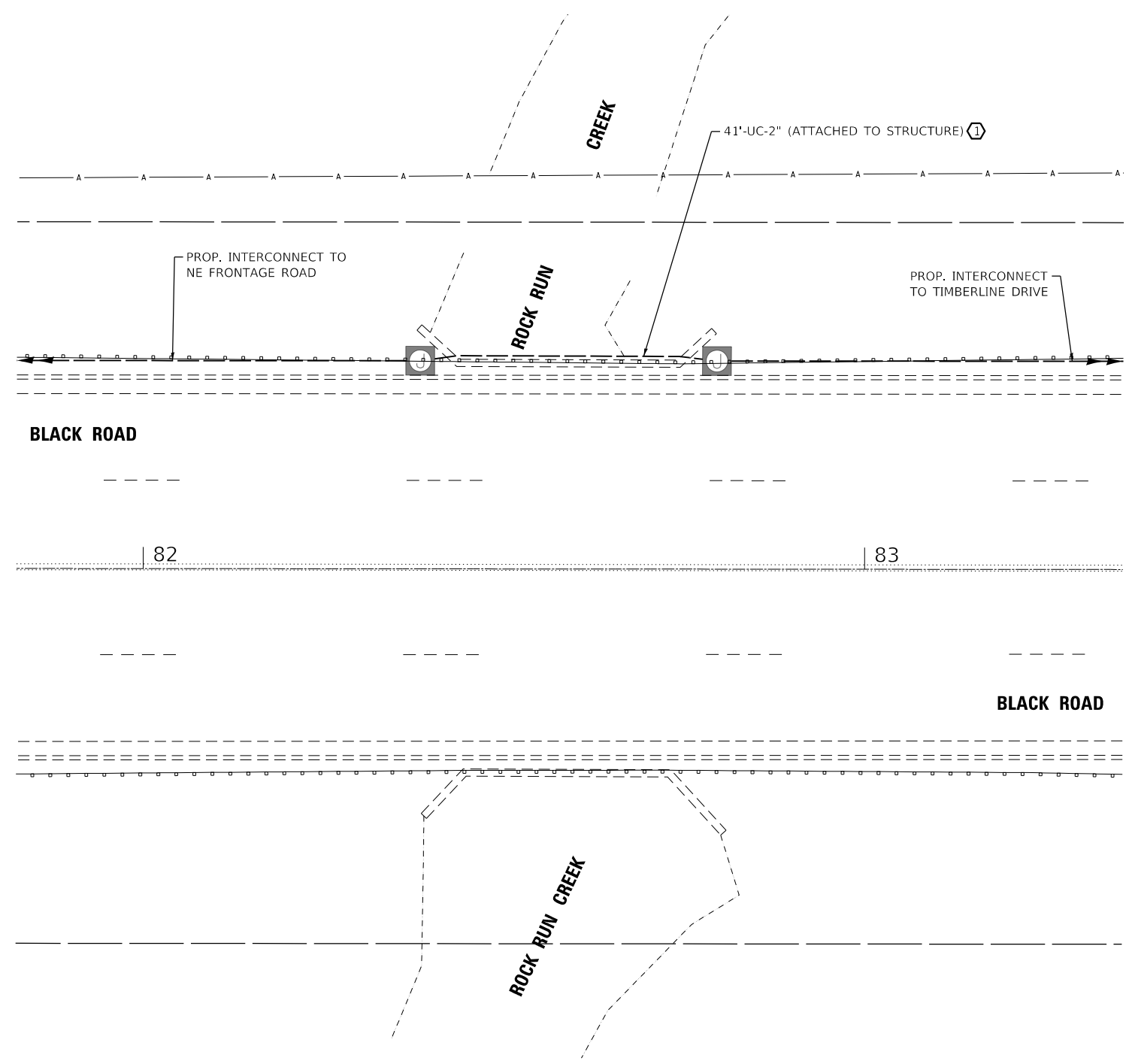
FILE NAME = Junction EXHB - I55.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
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Default	PLOT DATE = 8/20/2020	CHECKED - DPB	REVISED -
		DATE - 8/21/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT JUNCTION BOX PLAN - BLACK ROAD AT
I55 (BARACK OBAMA PRESIDENTIAL EXPRESSWAY) OVERPASS**

SCALE: 1"=10' SHEET 2 OF 3 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	44
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				



SN: 099-3033
BLACK ROAD OVER ROCK RUN CREEK

CONSTRUCTION NOTES:

- ① THE CONTRACTOR SHALL ATTACH CONDUIT TO THE OUTSIDE FACE OF PARAPET USING EXPANSION ANCHORS AND CONDUIT BRACKETS.

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 45

FILE NAME = Junction EXHB - RockRunCreek.dgn	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
5388.800	PLOT SCALE = 1:20	DRAWN - ZCW	REVISED -
Default	PLOT DATE = 8/20/2020	CHECKED - DPB	REVISED -
	DATE - 8/21/2020	DATE - 8/21/2020	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

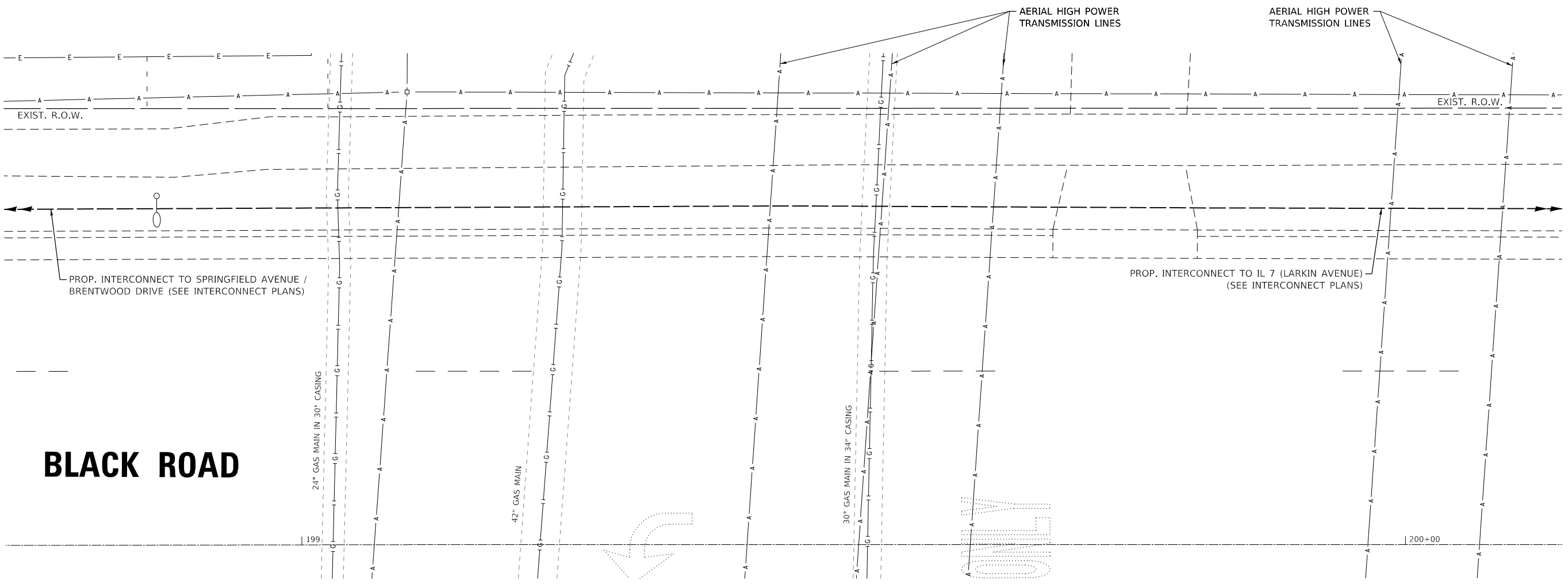
**INTERCONNECT JUNCTION BOX PLAN
 BLACK ROAD AT ROCK RUN CREEK BRIDGE**

SCALE: 1"=10' SHEET 3 OF 3 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	45
CONTRACT NO. 61G36				
ILLINOIS		FED. AID PROJECT		

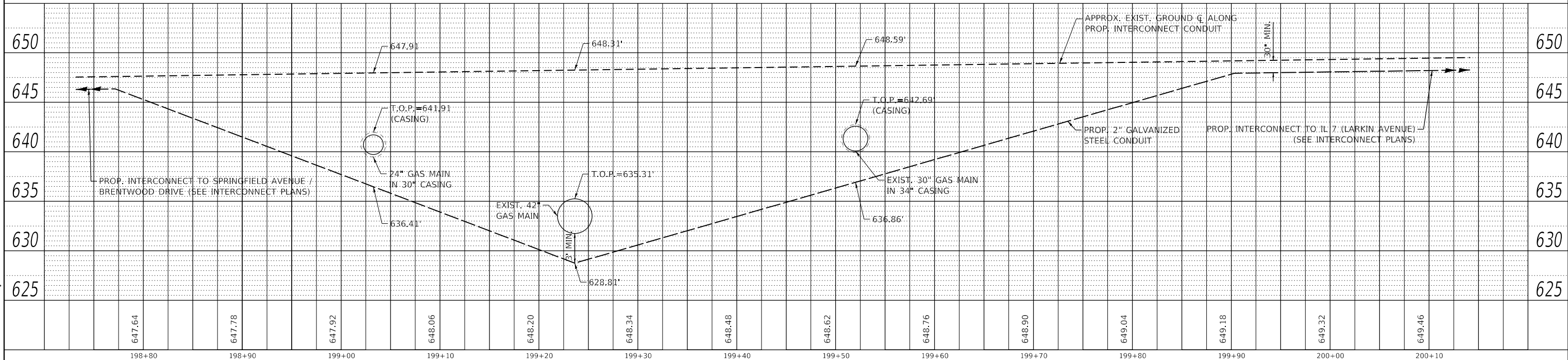
PLAN	SURVEYED	DATE
	PLOTTED	BY
	ALIGNMENT CHECKED	
	NOTE BOOK	
	NO.	

PROFILE	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	NOTE BOOK	
	NO.	



BLACK ROAD

NOTE:
GAS MAIN DEPTHS PER JUNE 15, 2020 FIELD LOCATE.



CH2M HILL
GEWALT HAMILTON
ASSOCIATES, INC.

FILE NAME = PP Gas Exhibit.dgn
5388.8
Default

USER NAME = zwallsten
PLOT SCALE = 1:10
PLOT DATE = 8/20/2020

DESIGNED - DPB
DRAWN - ZCW
CHECKED - DPB
DATE - 8/21/2020

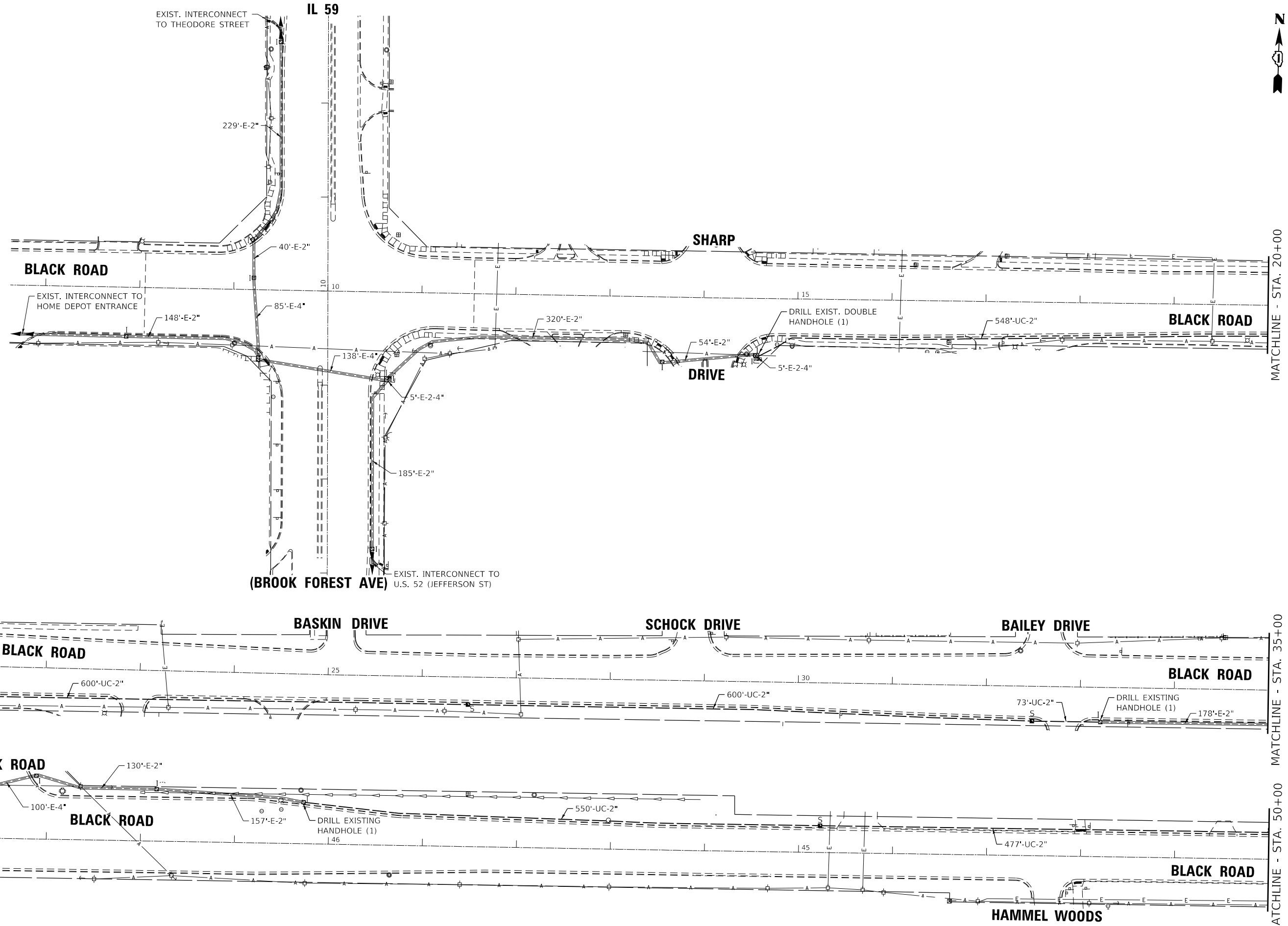
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN AND PROFILE
BLACK ROAD**

SCALE: H&V: 1"=5' SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	46
CONTRACT NO. 61G36				
ILLINOIS		FED. AID PROJECT		



GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 47

FILE NAME = Perm-Interconnect.dgn
5388.800
Sheet 1

USER NAME = zwallsten
PLOT SCALE = 1:100
PLOT DATE = 8/20/2020

DESIGNED - DPB
DRAWN - ZCW
CHECKED - DPB
DATE - 8/21/2020

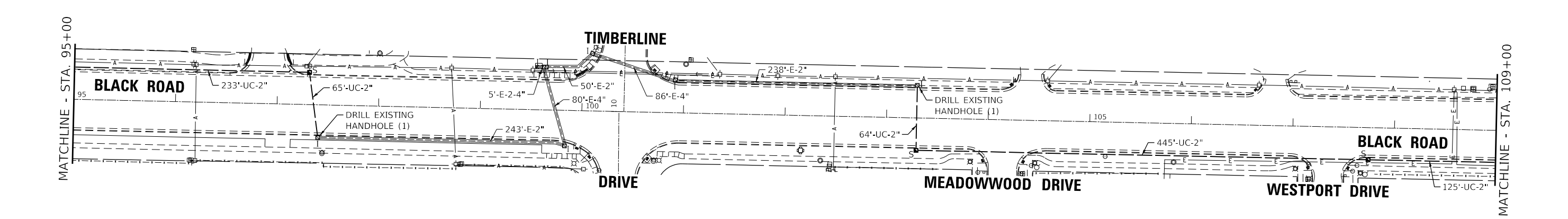
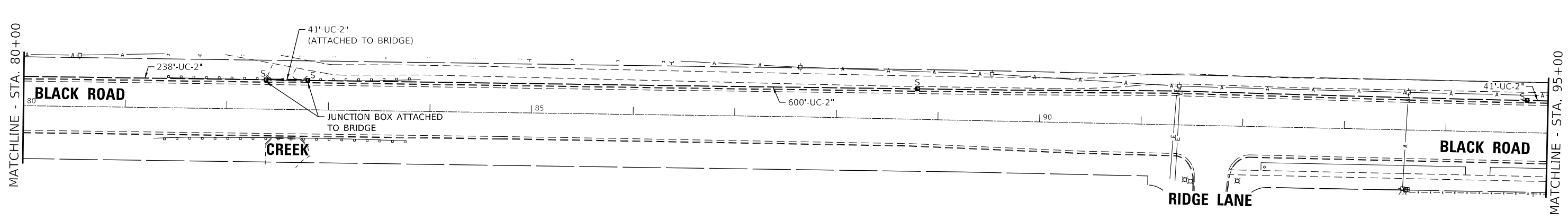
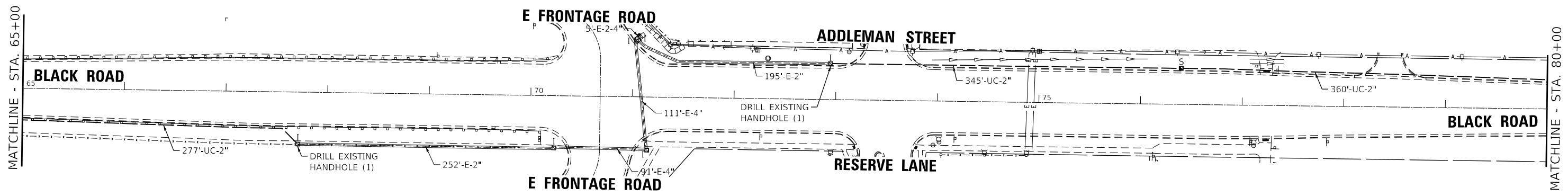
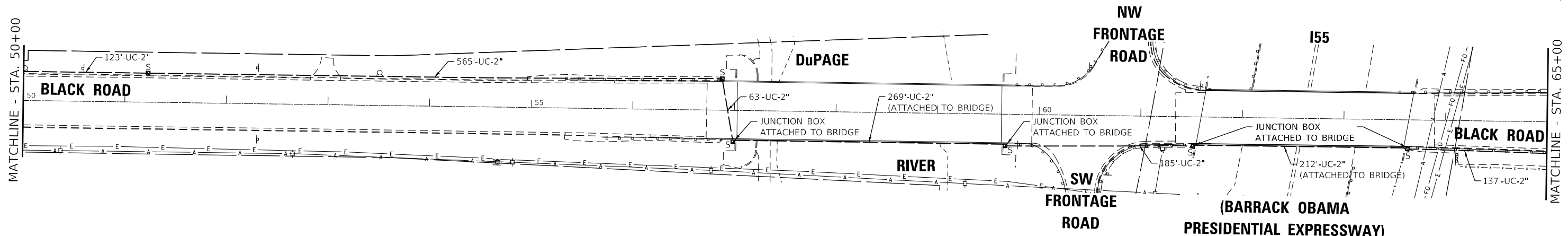
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BLACK ROAD INTERCONNECT PLAN - FROM IL 59
(BROOK FOREST AVE) TO U.S. 30 (PLAINFIELD RD)/RAYNOR AVENUE**

SCALE: 1"=50' SHEET 1 OF 6 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	47
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				



GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 48

FILE NAME =	USER NAME = zwallsten	DESIGNED - DPB	REVISED -
Perm-Interconnect.dgn		DRAWN - ZCW	REVISED -
5388.800		CHECKED - DPB	REVISED -
Sheet 2		DATE - 8/21/2020	REVISED -

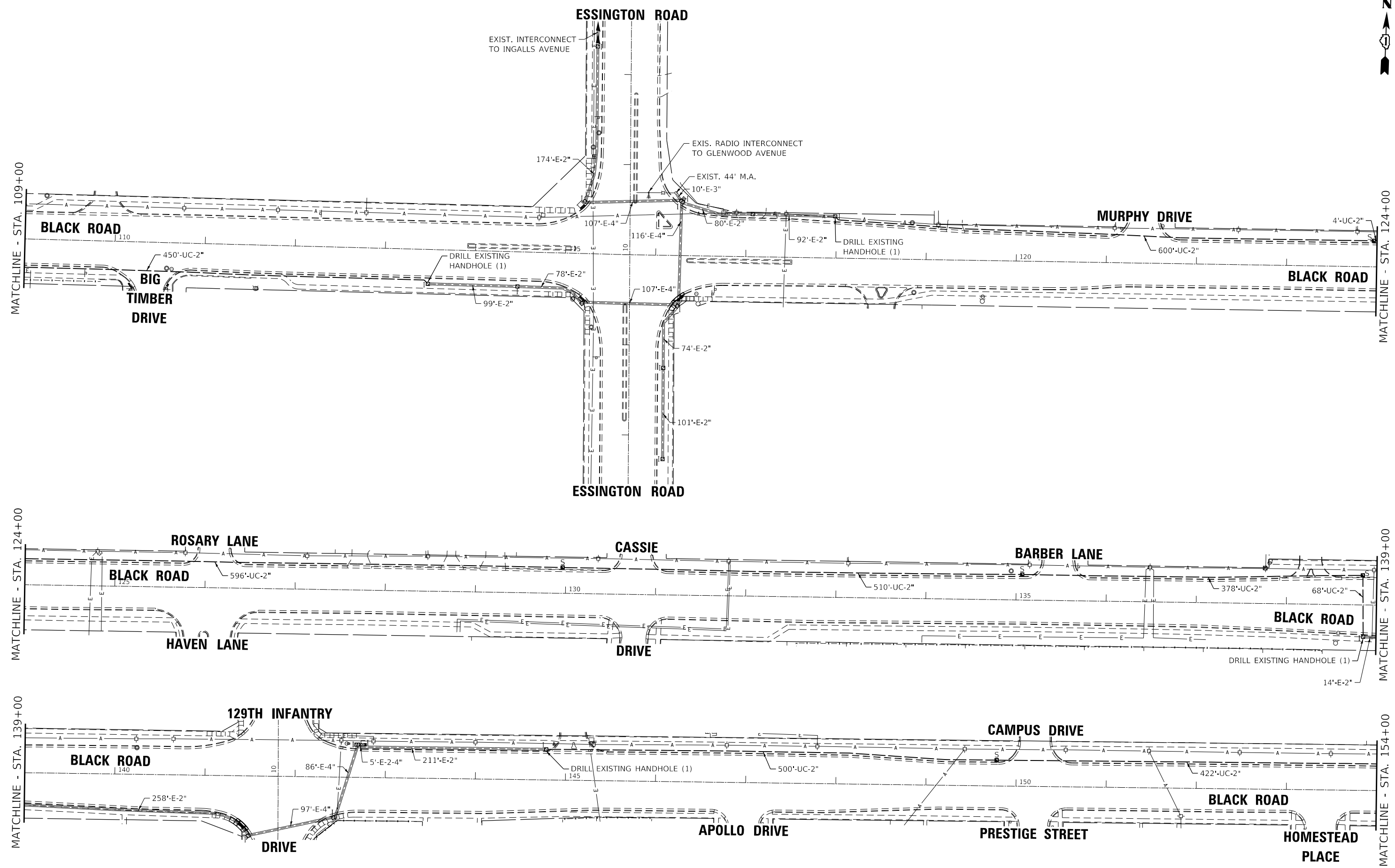
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BLACK ROAD INTERCONNECT PLAN - FROM IL 59
(BROOK FOREST AVE) TO U.S. 30 (PLAINFIELD RD)/RAYNOR AVENUE

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	48
CONTRACT NO. 61G36				

SCALE: 1"=50' SHEET 2 OF 6 SHEETS STA. TO STA.

ILLINOIS FED. AID PROJECT



GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 49

FILE NAME = Perm-Interconnect.dgn
 5388.800
 Sheet 3

USER NAME = zwallsten
 PLOT SCALE = 1:100
 PLOT DATE = 8/20/2020

DESIGNED - DPB
 DRAWN - ZCW
 CHECKED - DPB
 DATE - 8/21/2020

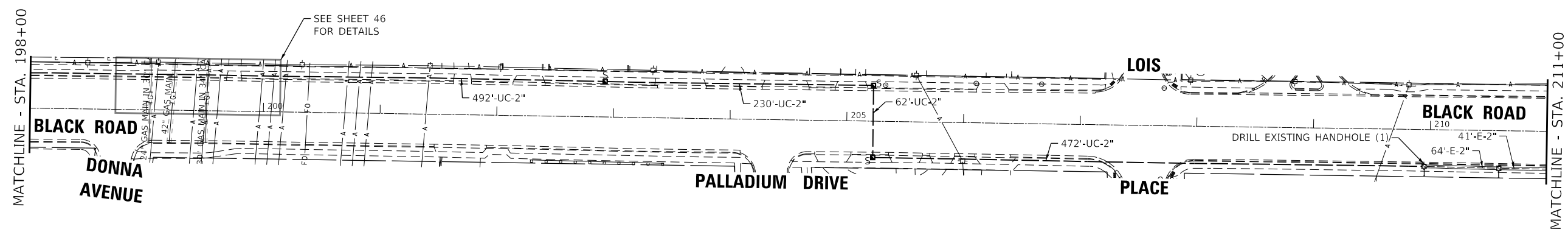
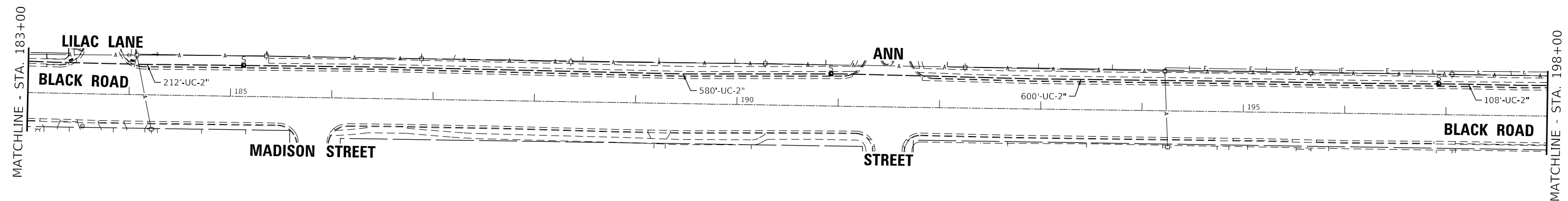
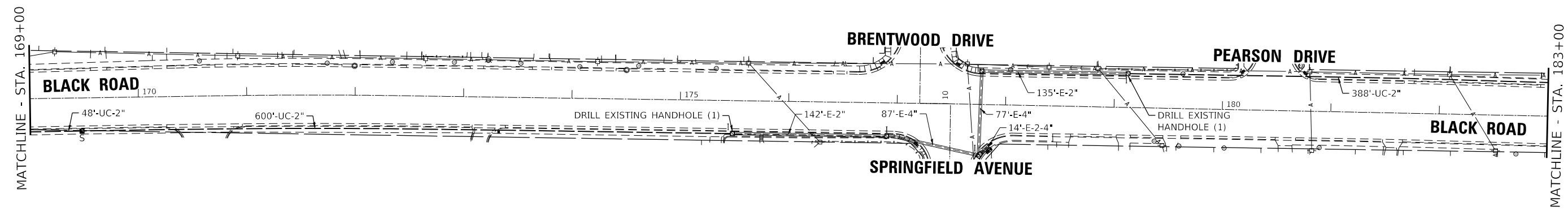
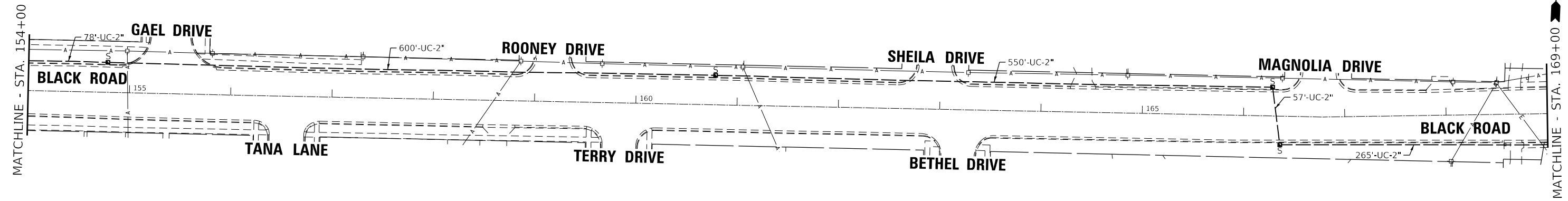
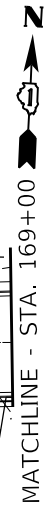
REVISED -
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 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BLACK ROAD INTERCONNECT PLAN - FROM IL 59
 (BROOK FOREST AVE) TO U.S. 30 (PLAINFIELD RD)/RAYNOR AVENUE**

SCALE: 1"=50' SHEET 3 OF 6 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	49
CONTRACT NO. 61G36			ILLINOIS FED. AID PROJECT	



GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 50

FILE NAME = Perm-Interconnect.dgn
5388.800
Sheet 4

USER NAME = zwallsten
PLOT SCALE = 1:100
PLOT DATE = 8/20/2020

DESIGNED - DPB
DRAWN - ZCW
CHECKED - DPB
DATE - 8/21/2020

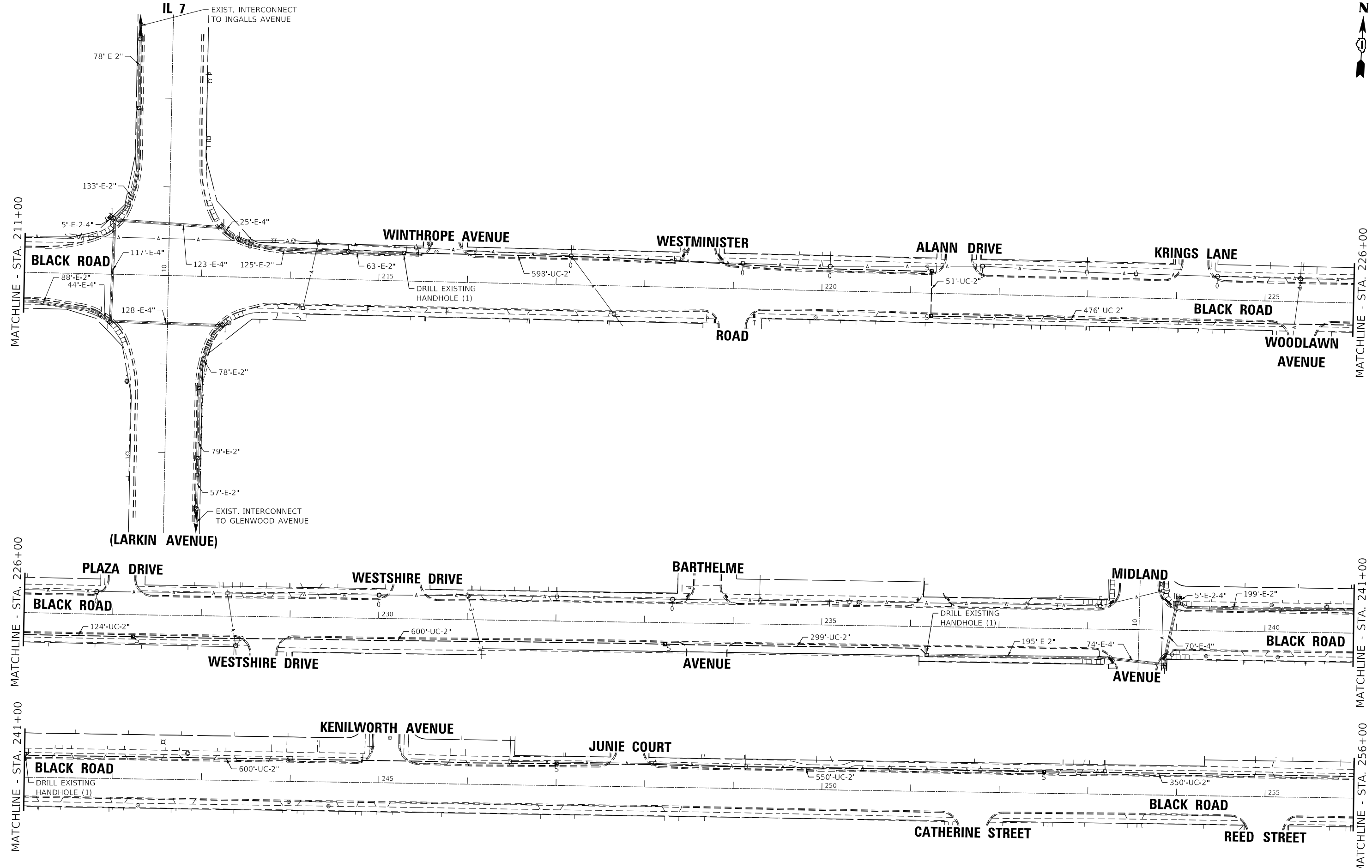
REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BLACK ROAD INTERCONNECT PLAN - FROM IL 59
(BROOK FOREST AVE) TO U.S. 30 (PLAINFIELD RD)/RAYNOR AVENUE**

SCALE: 1"=50' SHEET 4 OF 6 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	50
CONTRACT NO. 61G36				
ILLINOIS		FED. AID PROJECT		



GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 51

FILE NAME = Perm-Interconnect.dgn
 5388.800
 Sheet 5

USER NAME = zwallsten
 PLOT SCALE = 1:100
 PLOT DATE = 8/20/2020

DESIGNED - DPB
 DRAWN - ZCW
 CHECKED - DPB
 DATE - 8/21/2020

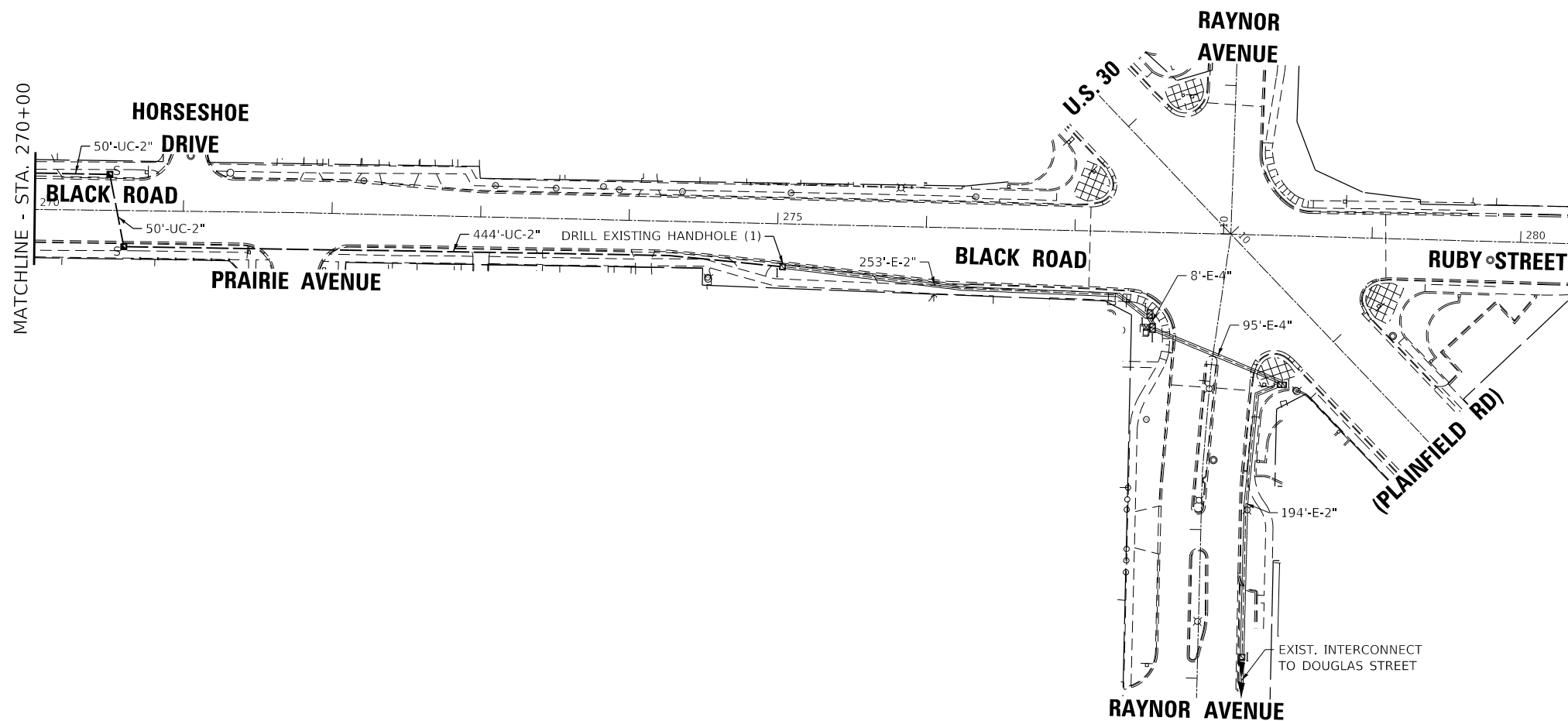
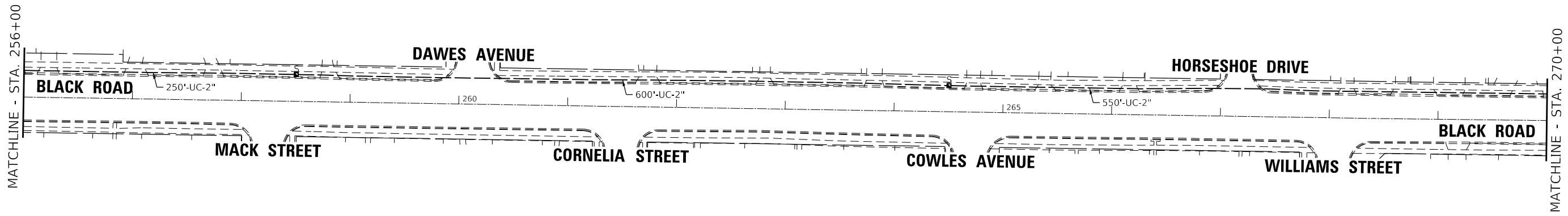
REVISED -
 REVISED -
 REVISED -
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BLACK ROAD INTERCONNECT PLAN - FROM IL 59
 (BROOK FOREST AVE) TO U.S. 30 (PLAINFIELD RD)/RAYNOR AVENUE**

SCALE: 1"=50' SHEET 5 OF 6 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	51
ILLINOIS FED. AID PROJECT			CONTRACT NO. 61G36	



GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 52

FILE NAME =	USER NAME = zwallsten
Perm-Interconnect.dgn	
5388.800	
Sheet 6	

DESIGNED - DPB	REVISIONS
DRAWN - ZCW	REVISIONS
CHECKED - DPB	REVISIONS
DATE - 8/21/2020	REVISIONS

DESIGNED - DPB	REVISIONS
DRAWN - ZCW	REVISIONS
CHECKED - DPB	REVISIONS
DATE - 8/21/2020	REVISIONS

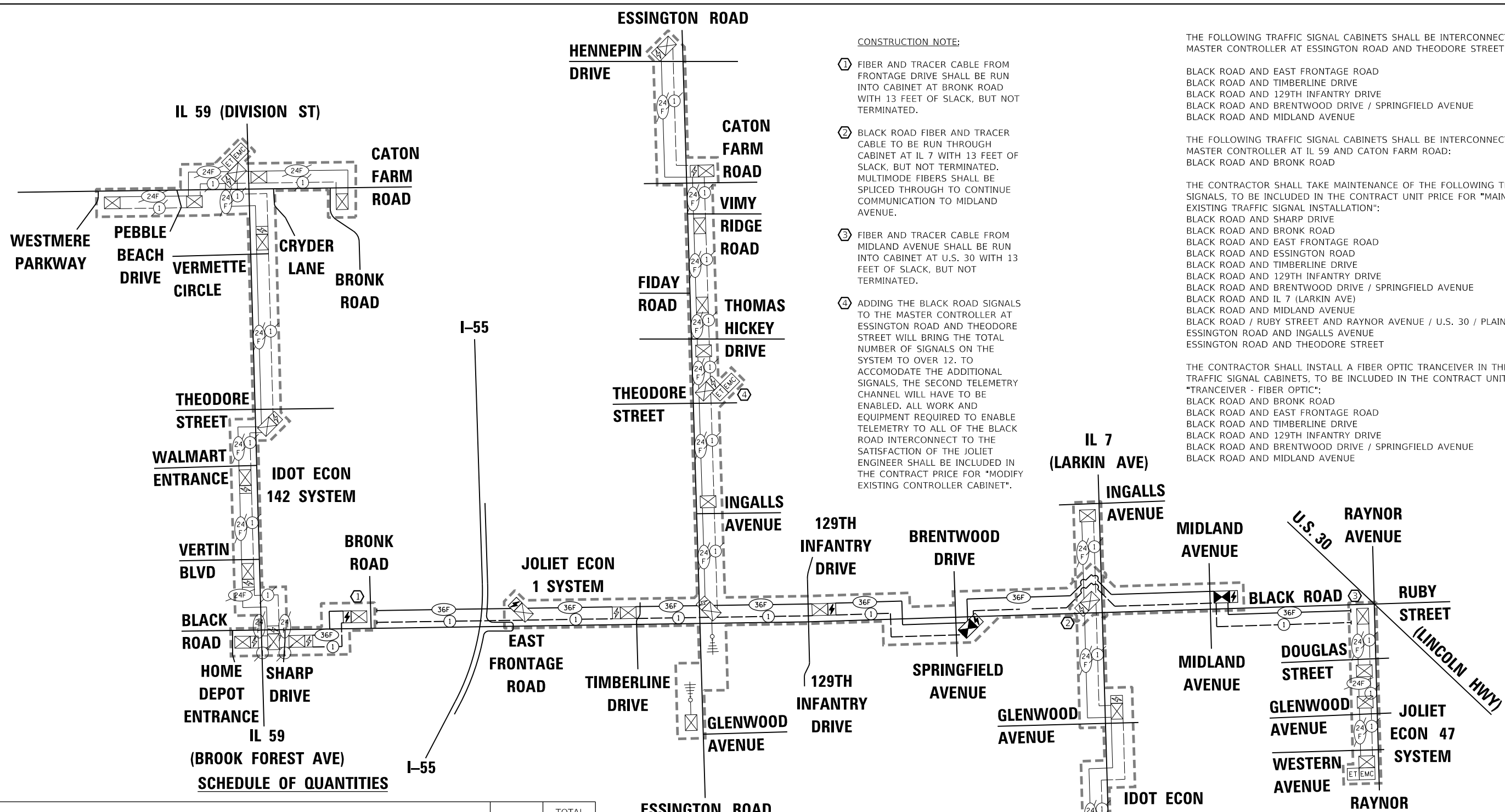
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DRAWN - ZCW	REVISIONS
CHECKED - DPB	REVISIONS
DATE - 8/21/2020	REVISIONS

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BLACK ROAD INTERCONNECT PLAN - FROM IL 59
(BROOK FOREST AVE) TO U.S. 30 (PLAINFIELD RD)/RAYNOR AVENUE**

SCALE: 1"=50' SHEET 6 OF 6 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	52
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				



- CONSTRUCTION NOTE:**
- ① FIBER AND TRACER CABLE FROM FRONTAGE DRIVE SHALL BE RUN INTO CABINET AT BRONK ROAD WITH 13 FEET OF SLACK, BUT NOT TERMINATED.
 - ② BLACK ROAD FIBER AND TRACER CABLE TO BE RUN THROUGH CABINET AT IL 7 WITH 13 FEET OF SLACK, BUT NOT TERMINATED. MULTIMODE FIBERS SHALL BE SPLICED THROUGH TO CONTINUE COMMUNICATION TO MIDLAND AVENUE.
 - ③ FIBER AND TRACER CABLE FROM MIDLAND AVENUE SHALL BE RUN INTO CABINET AT U.S. 30 WITH 13 FEET OF SLACK, BUT NOT TERMINATED.
 - ④ ADDING THE BLACK ROAD SIGNALS TO THE MASTER CONTROLLER AT ESSINGTON ROAD AND THEODORE STREET WILL BRING THE TOTAL NUMBER OF SIGNALS ON THE SYSTEM TO OVER 12. TO ACCOMMODATE THE ADDITIONAL SIGNALS, THE SECOND TELEMETRY CHANNEL WILL HAVE TO BE ENABLED. ALL WORK AND EQUIPMENT REQUIRED TO ENABLE TELEMETRY TO ALL OF THE BLACK ROAD INTERCONNECT TO THE SATISFACTION OF THE JOLIET ENGINEER SHALL BE INCLUDED IN THE CONTRACT PRICE FOR "MODIFY EXISTING CONTROLLER CABINET".

THE FOLLOWING TRAFFIC SIGNAL CABINETS SHALL BE INTERCONNECTED TO THE MASTER CONTROLLER AT ESSINGTON ROAD AND THEODORE STREET:

- BLACK ROAD AND EAST FRONTAGE ROAD
- BLACK ROAD AND TIMBERLINE DRIVE
- BLACK ROAD AND 129TH INFANTRY DRIVE
- BLACK ROAD AND BRENTWOOD DRIVE / SPRINGFIELD AVENUE
- BLACK ROAD AND MIDLAND AVENUE

THE FOLLOWING TRAFFIC SIGNAL CABINETS SHALL BE INTERCONNECTED TO THE MASTER CONTROLLER AT IL 59 AND CATON FARM ROAD:

- BLACK ROAD AND BRONK ROAD

THE CONTRACTOR SHALL TAKE MAINTENANCE OF THE FOLLOWING TRAFFIC SIGNALS, TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION":

- BLACK ROAD AND SHARP DRIVE
- BLACK ROAD AND BRONK ROAD
- BLACK ROAD AND EAST FRONTAGE ROAD
- BLACK ROAD AND ESSINGTON ROAD
- BLACK ROAD AND TIMBERLINE DRIVE
- BLACK ROAD AND 129TH INFANTRY DRIVE
- BLACK ROAD AND BRENTWOOD DRIVE / SPRINGFIELD AVENUE
- BLACK ROAD AND IL 7 (LARKIN AVE)
- BLACK ROAD AND MIDLAND AVENUE
- BLACK ROAD / RUBY STREET AND RAYNOR AVENUE / U.S. 30 / PLAINFIELD ROAD
- ESSINGTON ROAD AND INGALLS AVENUE
- ESSINGTON ROAD AND THEODORE STREET

THE CONTRACTOR SHALL INSTALL A FIBER OPTIC TRANCEIVER IN THE FOLLOWING TRAFFIC SIGNAL CABINETS, TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR "TRANCEIVER - FIBER OPTIC":

- BLACK ROAD AND BRONK ROAD
- BLACK ROAD AND EAST FRONTAGE ROAD
- BLACK ROAD AND TIMBERLINE DRIVE
- BLACK ROAD AND 129TH INFANTRY DRIVE
- BLACK ROAD AND BRENTWOOD DRIVE / SPRINGFIELD AVENUE
- BLACK ROAD AND MIDLAND AVENUE

IL 59 (DIVISION ST)

THEODORE STREET

WALMART ENTRANCE

VERTIN BLVD

BLACK ROAD

HOME DEPOT ENTRANCE

IL 59 (BROOK FOREST AVE)

SCHEDULE OF QUANTITIES

ITEM DESCRIPTION	UNITS	TOTAL QTY.
EXPLORATION TRENCH 72" DEPTH	FOOT	100
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	21,437
CONDUIT ATTACHED TO STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT	522
JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 16" X 12" X 8"	EACH	6
HANDHOLE	EACH	38
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2
TRANSCIEVER - FIBER OPTIC	EACH	6
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	28,013
DRILL EXISTING HANDHOLE	EACH	18
MODIFY EXISTING CONTROLLER CABINET	EACH	1
ROD AND CLEAN EXISTING CONDUIT	FOOT	800
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	28,013

NOTE:
TRAFFIC SIGNAL OPTIMIZATION TO BE COMPLETED BY OTHERS FOLLOWING THE INSTALLATION OF THE FIBER OPTIC INTERCONNECT.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEMS.

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 53

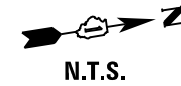
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Default	PLOT DATE = 8/20/2020	DATE - 8/21/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

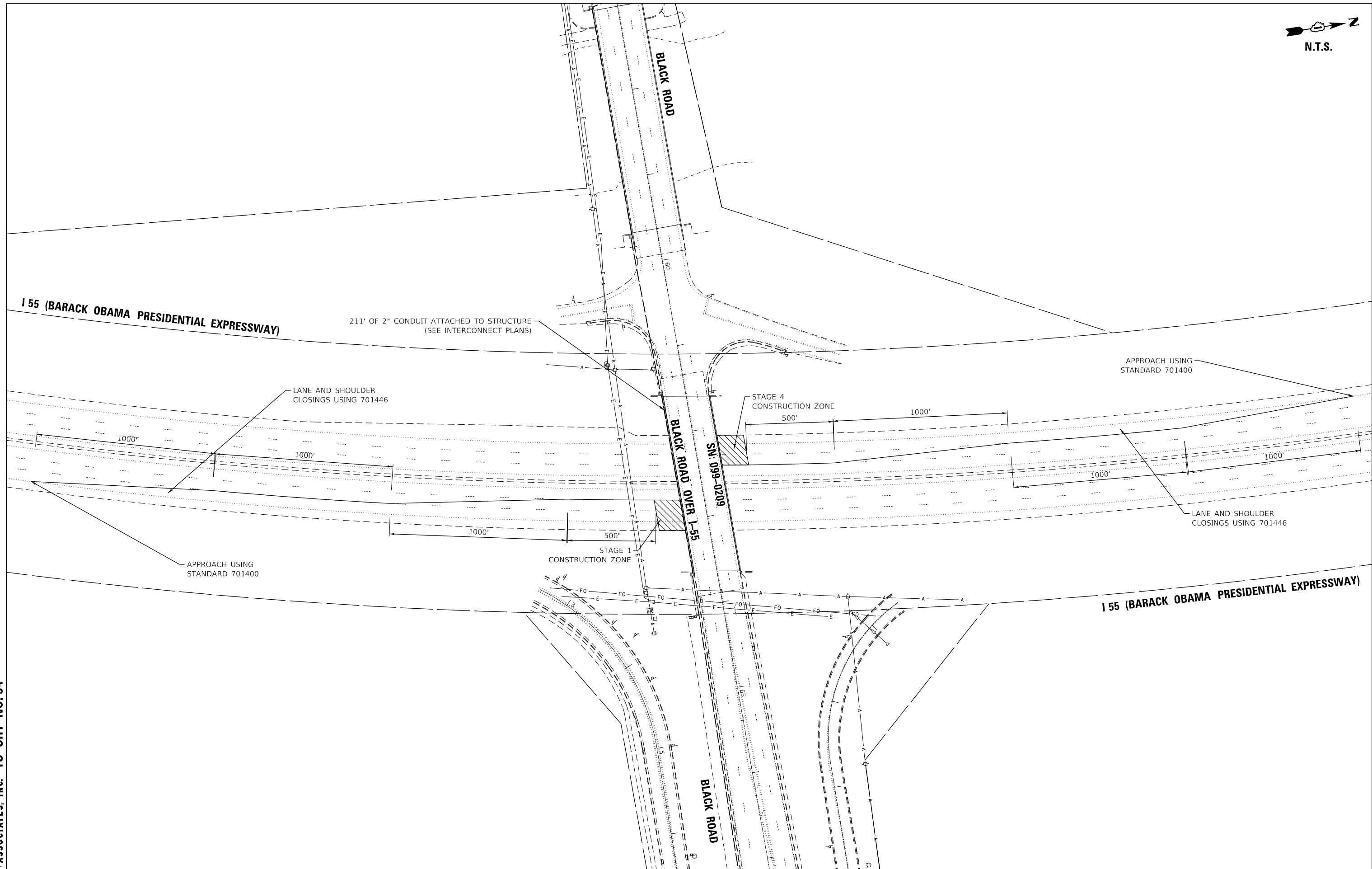
INTERCONNECT SCHEMATIC AND SCHEDULE OF QUANTITIES
IDOT SYSTEMS 125 AND 142 / JOLIET SYSTEMS 1 AND 47

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	53
ILLINOIS / FED. AID PROJECT			CONTRACT NO. 61G36	

SCALE: None SHEET OF SHEETS STA. TO STA.



N.T.S.



GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 54

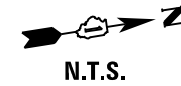
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		DATE - 8/21/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

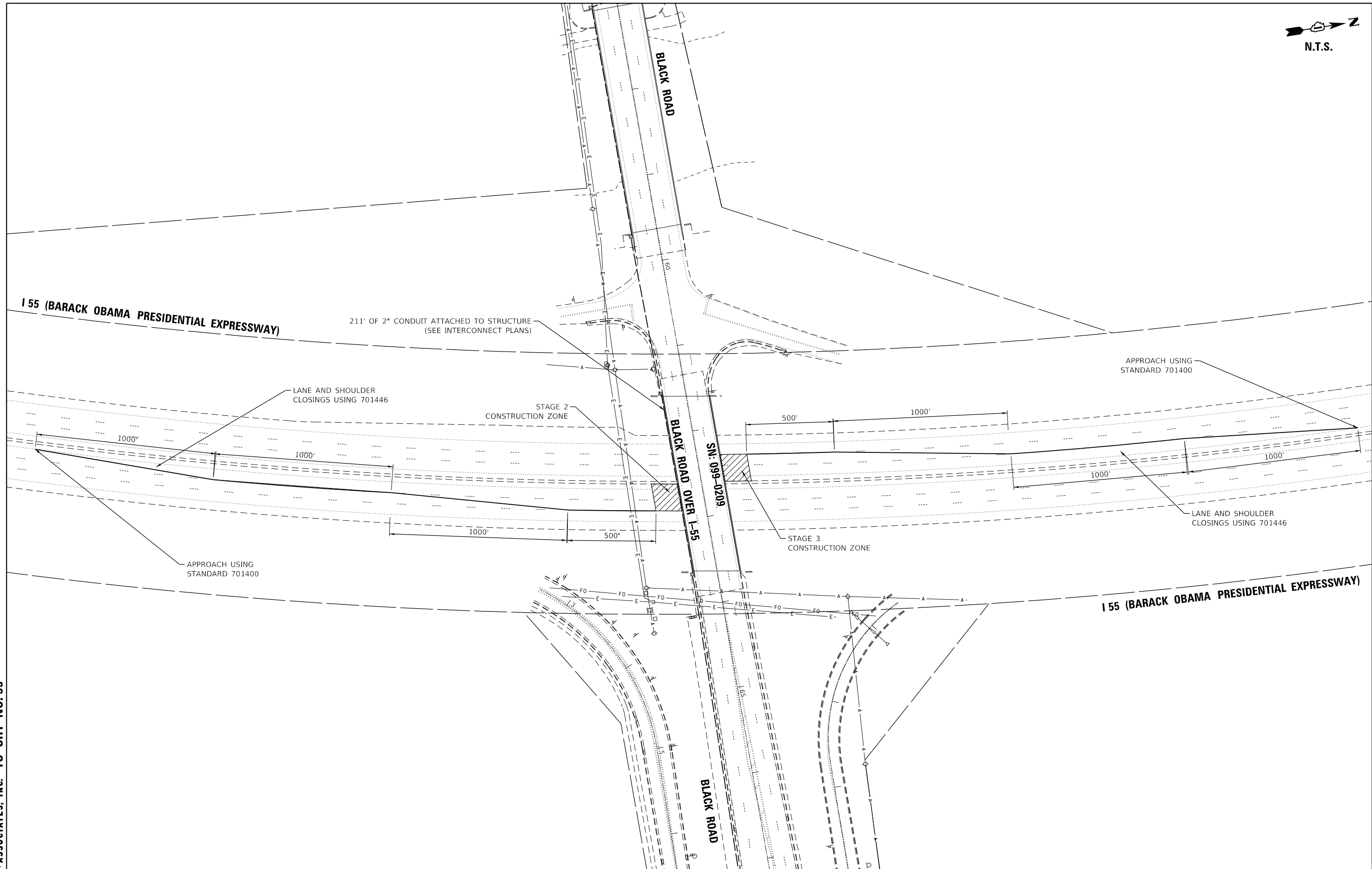
**TRAFFIC CONTROL AND TRAFFIC STAGING SCHEMATIC - STAGES 1 & 4
I55 (BARACK OBAMA PRESIDENTIAL EXPRESSWAY)**

SCALE: None SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	54
ILLINOIS FED. AID PROJECT			CONTRACT NO. 61G36	



N.T.S.



GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 55

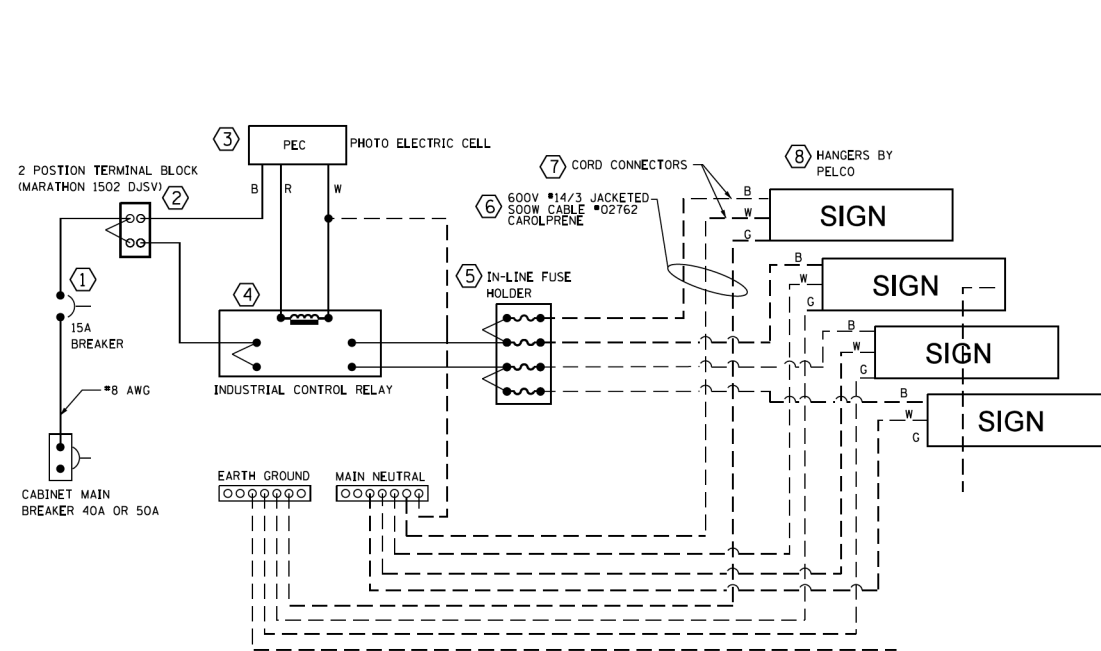
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	DATE = 8/21/2020	DATE - 8/21/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL AND TRAFFIC STAGING SCHEMATIC - STAGES 2 & 3
I55 (BARACK OBAMA PRESIDENTIAL EXPRESSWAY)**

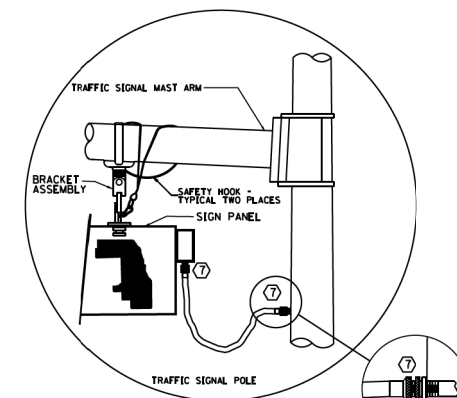
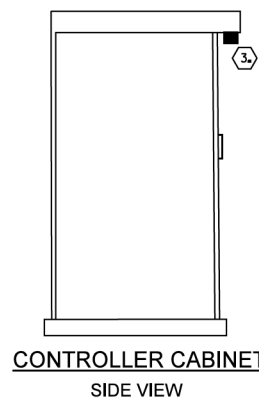
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	55
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				



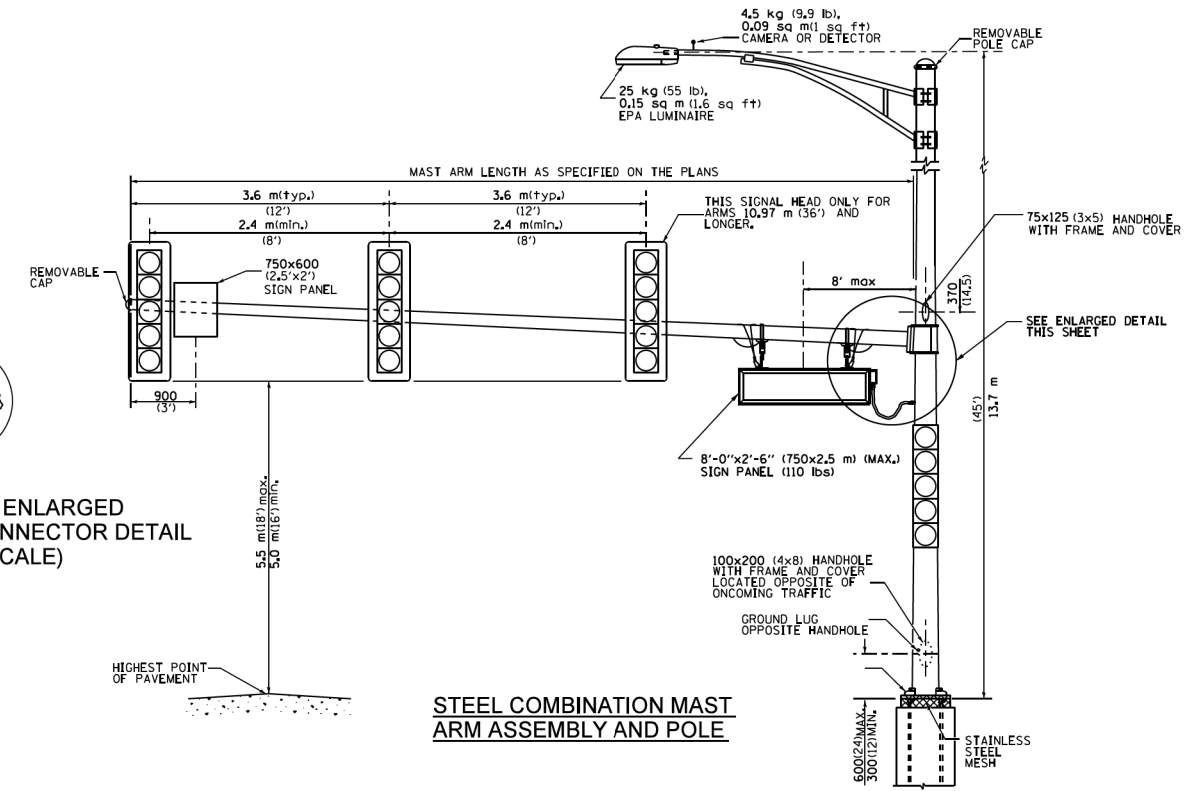
LED SIGN WIRING DETAIL

DESCRIPTION	MANUFACTURER	MODEL	NOTES
1. CIRCUIT BREAKER		15 AMPERE	
2. TERMINAL BLOCK			
3. PHOTO ELECTRIC CONTROL			
4. CONTRACTOR (INDUSTRIAL CONTROL RELAY)			BOLT ON W/SCREW TERMINAL
5. IN-LINE FUSE HOLDER WITH 5 AMP FUSE			
6. ELECTRIC CABLE, No. 14, 3/C (BLACK, WHITE, GREEN)			
7. CORD/CABLE CONNECTOR			
8. SIGN MOUNTING HARDWARE			



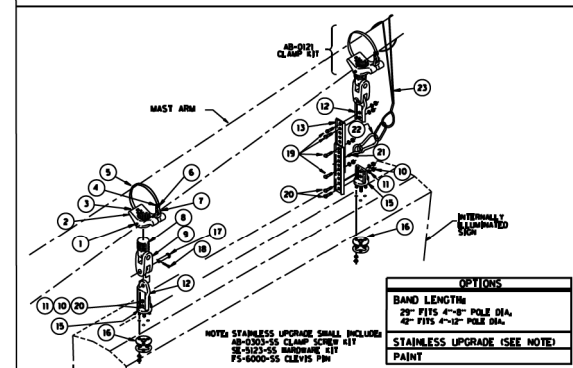
LED SIGN ENLARGED CABLE CONNECTOR DETAIL (NOT TO SCALE)

LED SIGN ENLARGED CABLE CONNECTOR DETAIL (NOT TO SCALE)



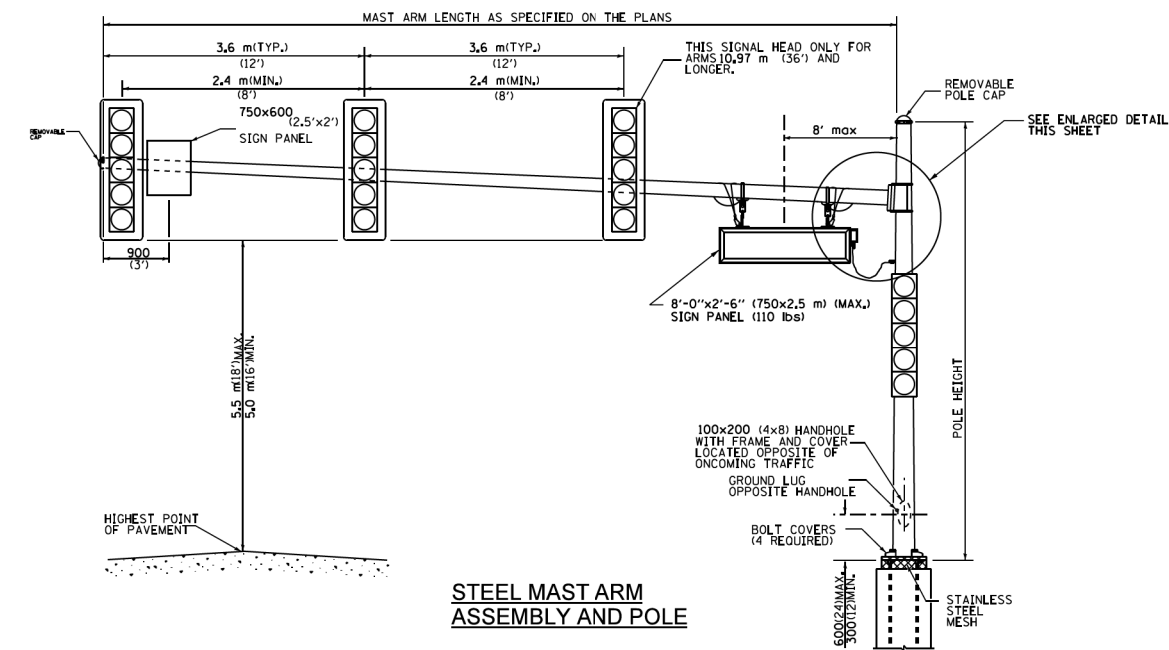
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE

TITLE: BRACKET, FREE-SWINGING MAST ARM SIGN W/BAND MOUNT MINI-BRAC



ITEM	PART NO.	DESCRIPTION	QTY
1	FS-3205-SS	SCREW, SET SQ HD 1/2"-20 X 5/8", STAINLESS	2
2	AB-0266-MI	CLAMP, MINI-BRAC BAND MOUNT, 1/2" NPS, ALUM	2
3	FS-6201-ZNI	PIN, GROOVE 3/16" X 1 1/2", ZINCI	2
4	AB-0244-SS	CLAMP, BAND 5/8", STAINLESS	2
5	AB-0243-L	BAND, 5/8", STAINLESS	2
6	FS-3202-SS	SCREW, SET SOC HD 5/16"-18, STAINLESS	2
7	AB-0303-GLV	KIT, CLAMP SCREW FOR MINI-BRAC, GALV	2
8	SE-0371-MI	ADAPTER, SPAN WIRE, DIE CAST ALUM W/ SS INSERT	2
9	SE-0464-M2	CLEVIS-CLEVIS, 1/2" X 1/2", ALUM W/ STAINLESS BUSHINGS	2
10	FS-1001-SS	NUT, HEX HD 5/16", STAINLESS	8
11	FS-4201-SS	WASHER, SPLIT LOCK, 5/16", STAINLESS	8
12	SE-0508-M2	EXTENDER CONNECTOR HANGER, ALUM W/ STAINLESS BUSHINGS	2
13	SE-0507-I1	EXTENDER, 11"	2
15	SE-0512-MI	HANGER, TRI-STUD, ALUM	2
16	SE-5048-SS	HARDWARE KIT W/ GASKET, 5/16" - 18, STAINLESS	2
17	FS-6000-GLV	PIN, CLEVIS, 5/8" X 2 1/4" EL, GALV	4
18	FS-6100-SS	PIN, COTTER HUMPED, 5/32" X 1.775" 304 STAINLESS	4
19	FS-2006-SS	BOLT, HEX HD, 5/16" - 18 X 1", STAINLESS	4
20	FS-2019-SS	BOLT, HEX HD, 5/16" - 18 X 1 1/4", STAINLESS	4
21		EYE HOOK, STAINLESS STEEL (RATED FOR APPROPRIATE LOAD)	2
22		CARABINER HOOK, STAINLESS STEEL (RATED FOR APPROPRIATE LOAD)	2
23	SH-1867-L	CABLE, SAFETY, FOR SIGN HANGERS, STAINLESS	2
	FS-9054-SS	SLEEVE, COMPRESSION, OVAL, STAINLESS	4
	FS-5101-SS	WIRE ROPE, 3/16" X 7 X 19, AIRCRAFT, TYPE 304 STAINLESS	2
	FS-6516-SS	CONNECTOR, THREADED, 3/16" X 1-1/2", STAINLESS	2
	Z-2042	INSTRUCTIONS, SAFETY CABLE FOR SIGN HANGERS	2

LED SIGN BRACKET DETAIL



STEEL MAST ARM ASSEMBLY AND POLE

GENERAL NOTE:

- SIGNAL HEADS, SIGN PANELS, AND OTHER ATTACHMENT ARE SHOWN FOR MINIMUM DESIGN LOADING PURPOSES ONLY. EACH SIGNAL HEAD SHALL WEIGH 36 Kg (80 lb) AND HAVE A PROJECTED AREA OF 1.37 sq. m (14.7 sq ft.).
- PHOTO ELECTRIC CELL IS TO BE MOUNTED ABOVE CABINET DOOR.
- THE SIGN SHALL BE LOCATED AT A MAXIMUM OF 8' FROM CENTER OF SIGN TO POLE.
- SIGN IS TO BE MOUNTED A MINIMUM OF 16' ABOVE PAVEMENT.
- CERTAIN ADDITIONAL INFORMATION MAY BE ALLOWED ON THE SIGN, VERIFY WITH ENGINEER.
- SIGNS SHALL NOT BE ENERGIZED WHEN TRAFFIC SIGNALS ARE POWERED BY THE UPS THE SIGNS SHALL BE CONNECTED TO THE UPS BYPASS CIRCUITRY.
- ALL 120 VOLT SYSTEM AND CONTROL WIRING SHALL BE #12 AWG STRANDED UNLESS OTHERWISE INDICATED.
- ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
- ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED AS INDICATED:
R = RED BL = BLUE W = WHITE
B = BLACK Y = YELLOW G = GREEN

All dimensions are in millimeters (inches) unless otherwise shown.

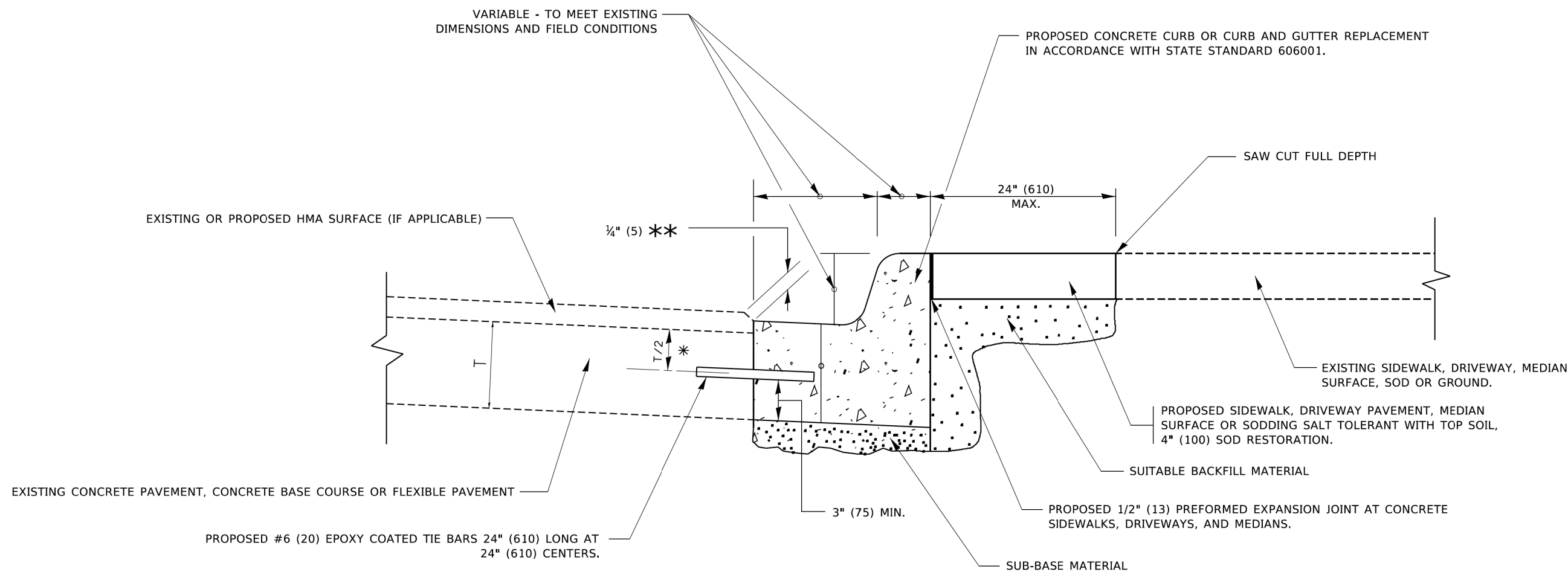
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Detail 01	PLOT DATE = 8/20/2020	DATE - 8/21/2020	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

LED ILLUMINATED SIGN DETAIL

SCALE: None SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	56
CONTRACT NO. 61G36				
ILLINOIS FED. AID PROJECT				



* 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.

** IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN.

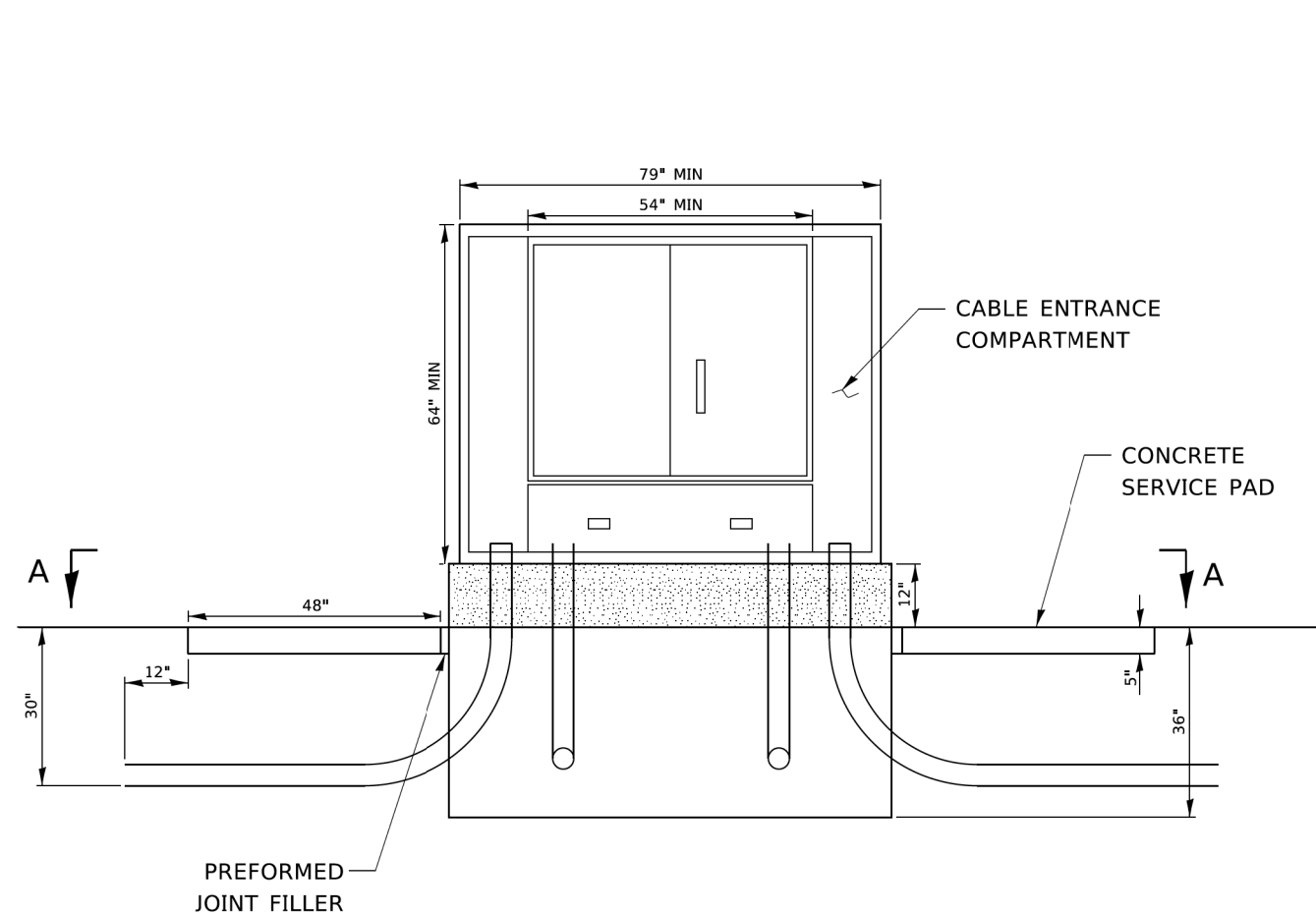
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5388.800	PLOT SCALE = 1:2	CHECKED -	REVISED - R. BORO 12-15-09
IDOT D1 STANDARD BD24	PLOT DATE = 8/20/2020	DATE - 03-11-94	REVISED - K. SMITH 07-11-19

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

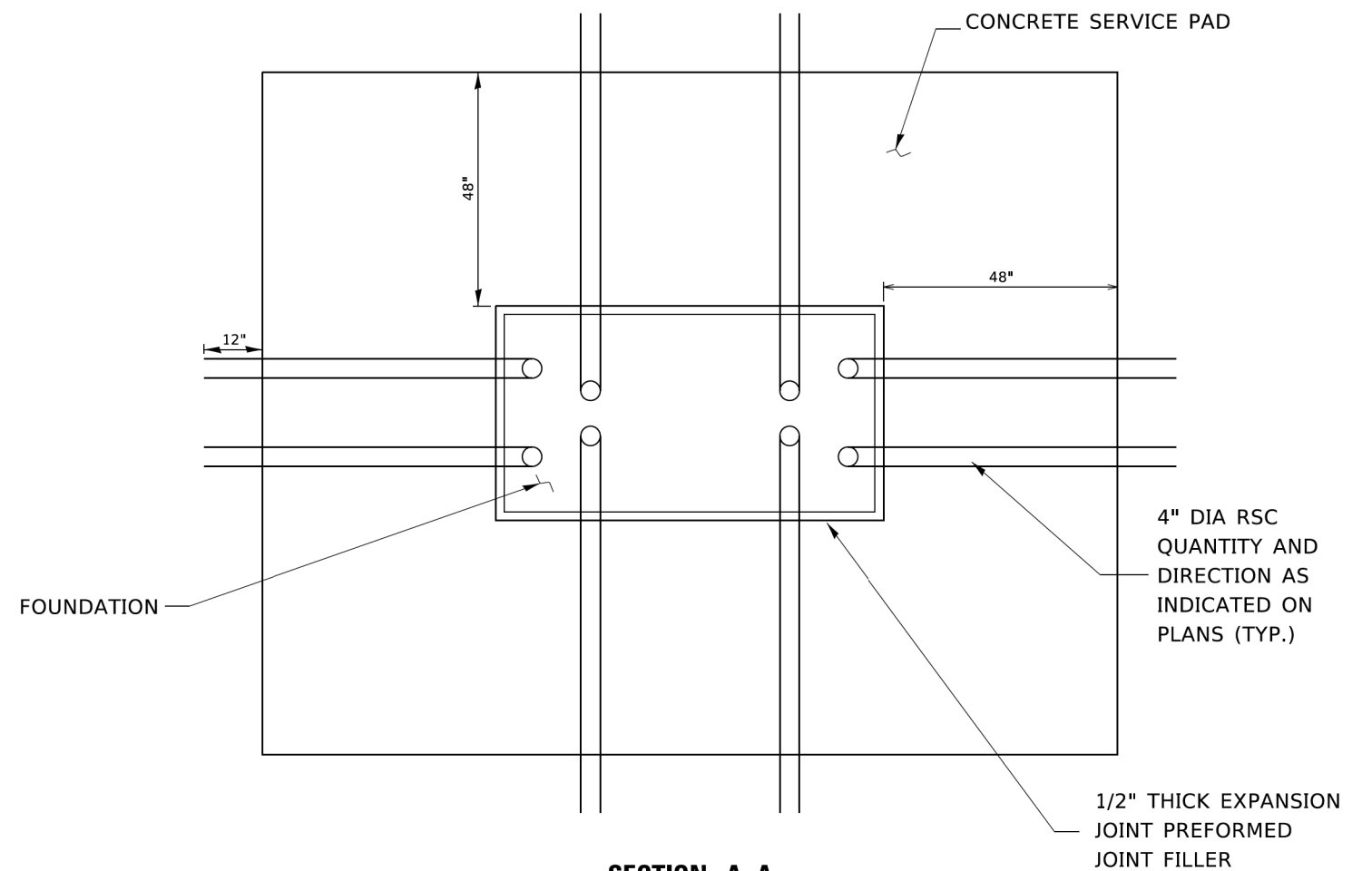
**CURB OR CURB AND GUTTER
REMOVAL AND REPLACEMENT**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
290	18-00517-00-TL	WILL	72	57
BD600-06 (BD-24)			CONTRACT NO. 61G36	
ILLINOIS FED. AID PROJECT				



ELEVATION VIEW



SECTION A-A

NOTES:

CABINET:
ALUMINUM 5052-H32

HARDWARE:
TYPE 304 STAINLESS STEEL

FINISH:
POLYESTER POWDER COATED GRAY

RACKS:
3/16" STEEL E.I.A. / T.I.A. SPACING (10-32 THREADS)

DOORS:
3 POINT LATCH, LATCH CONTROL SWITCH, PIANO HINGE, WIND STOP

CABLE ENTRANCE COMPARTMENT:
FOUR SLACK STORAGE BRACKETS WITH HEAVY DUTY VELCRO STRAPS TO SECURE CABLES,
TWO ENTRY HOLES FOR BRINGING CABLES INTO THE MAIN CABINET

MAIN CABINET:
2-9"-23" ADJUSTABLE WIDTH RACKS, ADJUSTABLE FRONT TO REAR POSITION (43" TALL)
2-19"-23" ADJUSTABLE WIDTH RACKS, SWING OUT (40" TALL)
166" OF TOTAL INCHES OF RACK SPACE (95 RU)
4-15" WATT SHATTER-SHIELD LIGHT FIXTURES

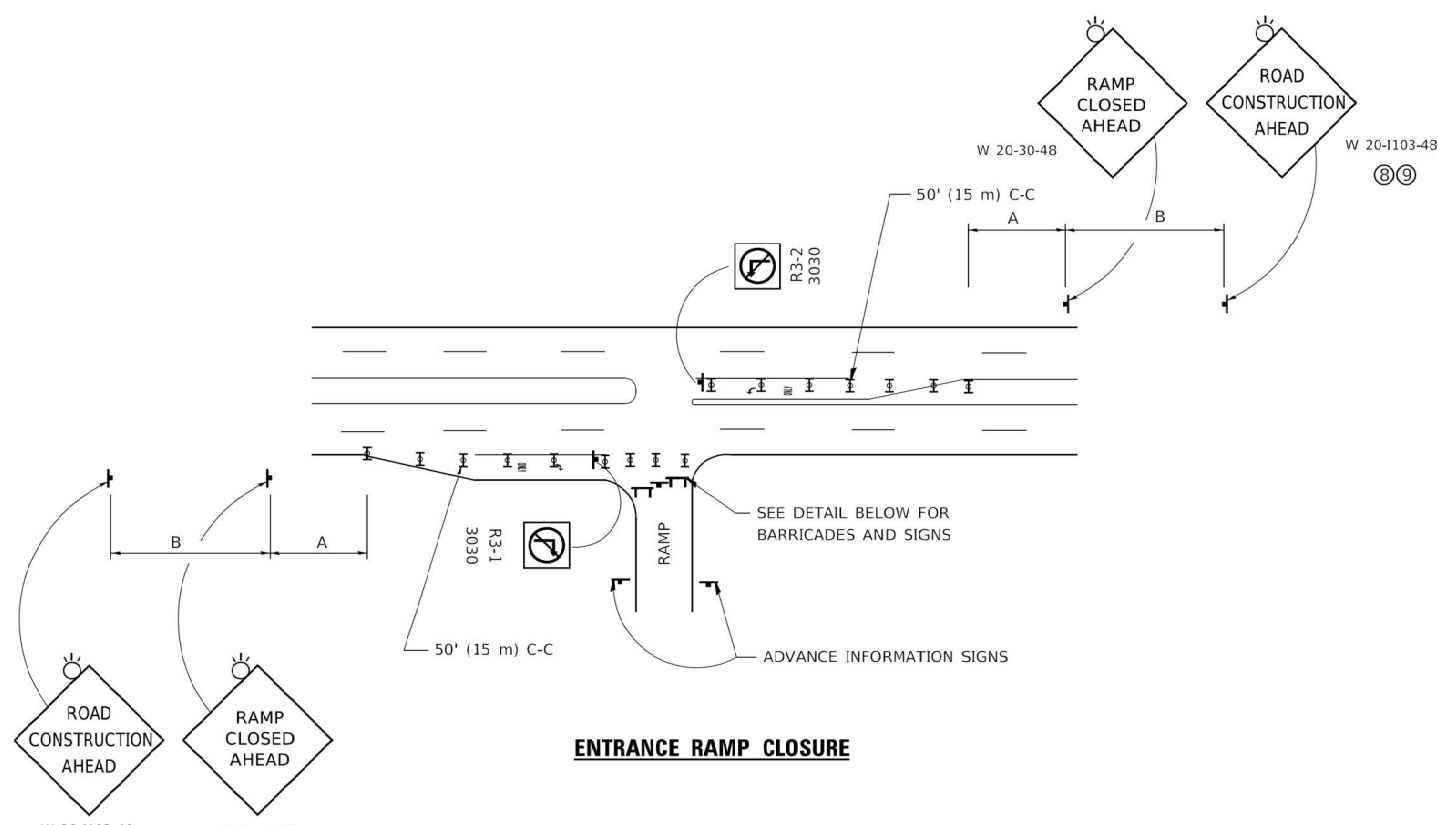
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		DATE - 05-02-16	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

FIBER OPTIC INTERCONNECT CABINET

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	58
BE-1050			CONTRACT NO. 61G36	
ILLINOIS FED. AID PROJECT				

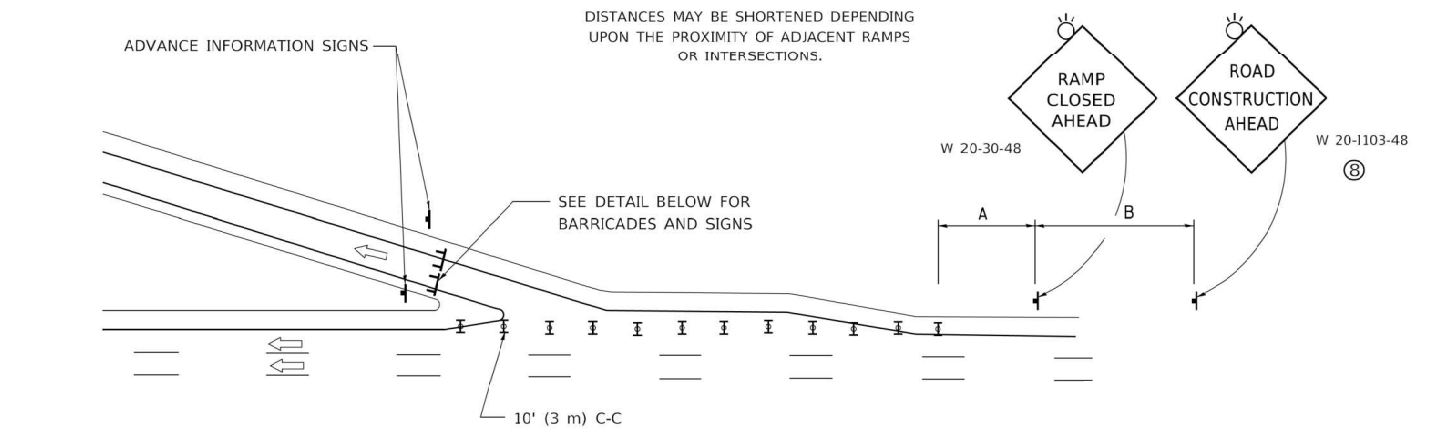


ENTRANCE RAMP CLOSURE

SIGN SPACING TABLE

FACILITY	DISTANCE BETWEEN SIGNS	
	A	B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY ≤24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL 55 MPH	500' (150 m)	500' (150 m)
ARTERIAL 50-45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	200' (60 m)	200' (60 m)

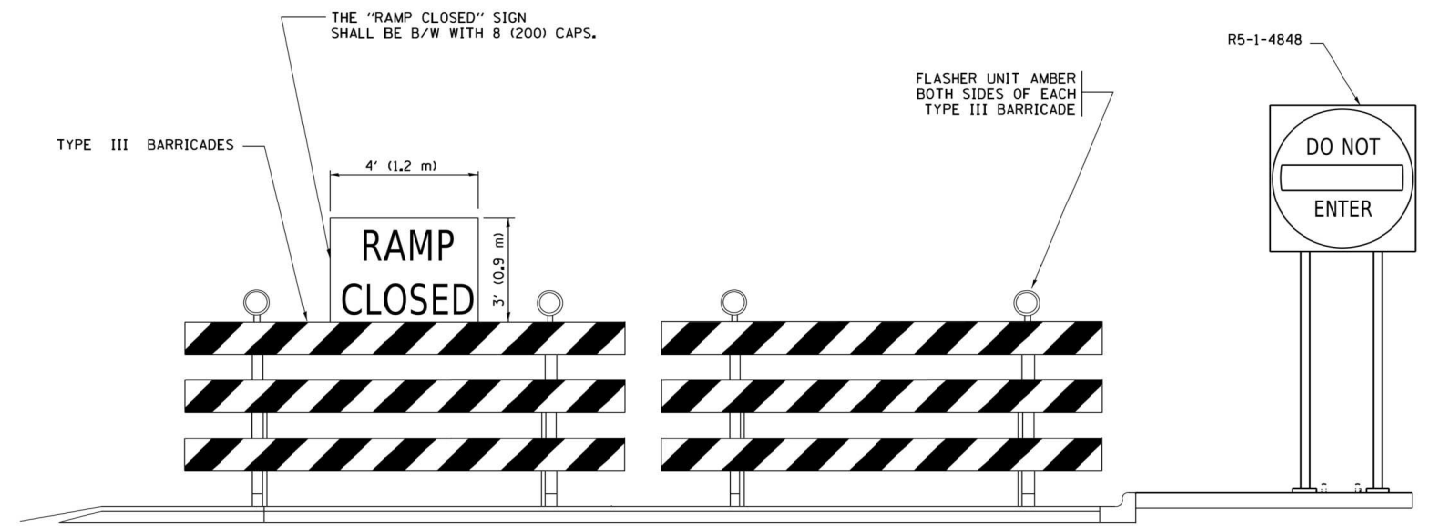
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.



EXIT RAMP CLOSURE

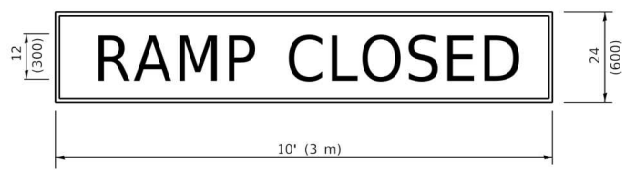
SYMBOLS

- ▬ TYPE II BARRICADE OR DRUM
- ⌈ TYPE III BARRICADE WITH 2 FLASHING LIGHTS



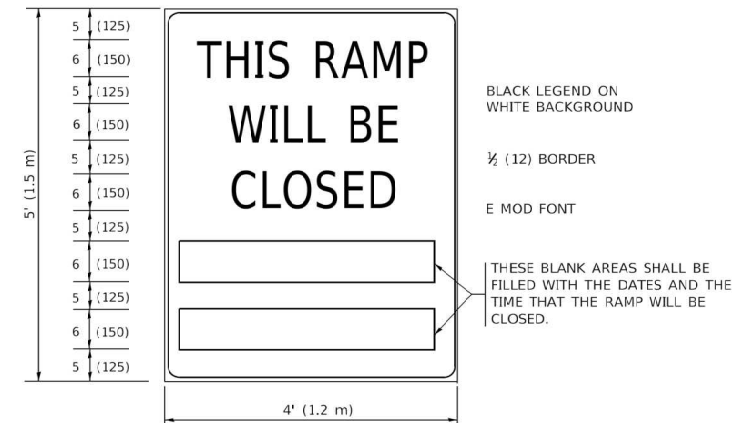
DETAIL FOR REQUIRED BARRICADES & SIGNS

RAMP CLOSURE ADVANCE WARNING SIGN



BLACK LEGEND ON ORANGE BACKGROUND MOUNTED DIAGONALLY
E MOD FONT
1 (25) BORDER
THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR EXIT RAMPS THAT WILL BE CLOSED FOR MORE THAN FOUR (4) CONSECUTIVE DAYS

RAMP CLOSURE ADVANCE INFORMATION SIGN



BLACK LEGEND ON WHITE BACKGROUND
1/2 (12) BORDER
E MOD FONT
THESE BLANK AREAS SHALL BE FILLED WITH THE DATES AND THE TIME THAT THE RAMP WILL BE CLOSED.

THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.
THESE SIGNS SHALL BE FABRICATED AND PAID FOR ACCORDING TO THE TEMPORARY INFORMATION SIGNING SPECIAL PROVISION

GENERAL NOTES:

- ① CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
- ② VERTICAL BARRICADES SHALL NOT BE USED FOR RAMP CLOSURES.
- ③ A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES, PRECEDED BY A W20-7 FLAGGER WARNING SIGN.
- ④ ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED WHEN THE RAMP IS CLOSED FOR MORE THAN FOUR (4) DAYS.
- ⑤ THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
- ⑥ AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
- ⑦ THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED FOUR (4) DAYS IN LENGTH
- ⑧ ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT ALREADY INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.
- ⑨ ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS SHALL BE INSTALLED ON THE LEFT SIDE OF TRAFFIC IF THE MEDIAN IS MORE THAN 10 FT WIDE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME - IDOT-StdDetail.dgn	USER NAME - zwallsten	DESIGNED - D.W.S.	REVISED - S.P.B._01-07
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IDOT D1 STANDARD TC08	PLOT DATE - 9/15/2020	CHECKED -	REVISED - M.D._06-13
		DATE - 02-83	REVISED - M.D._01-18

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ENTRANCE AND EXIT RAMP
CLOSURE DETAILS**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE. 298	SECTION 18-00517-00-TL	COUNTY WILL	TOTAL SHEETS 72	SHEET NO. 59
TC-08			CONTRACT NO. 61G36	
ILLINOIS FED. AID PROJECT				

FILE NAME - IDOT-StdDetail.s.dgn
 5388.800
 IDOT D1 STANDARD TC09-TC10

USER NAME - zwa11sten
 DESIGNED -
 DRAWN -
 PLOT SCALE - 1:1
 PLOT DATE - 9/15/2020

DESIGNED - D.W.S.
 DRAWN - S.P.A. 01-07
 CHECKED - S.P.A. 12-09
 DATE - 02-27

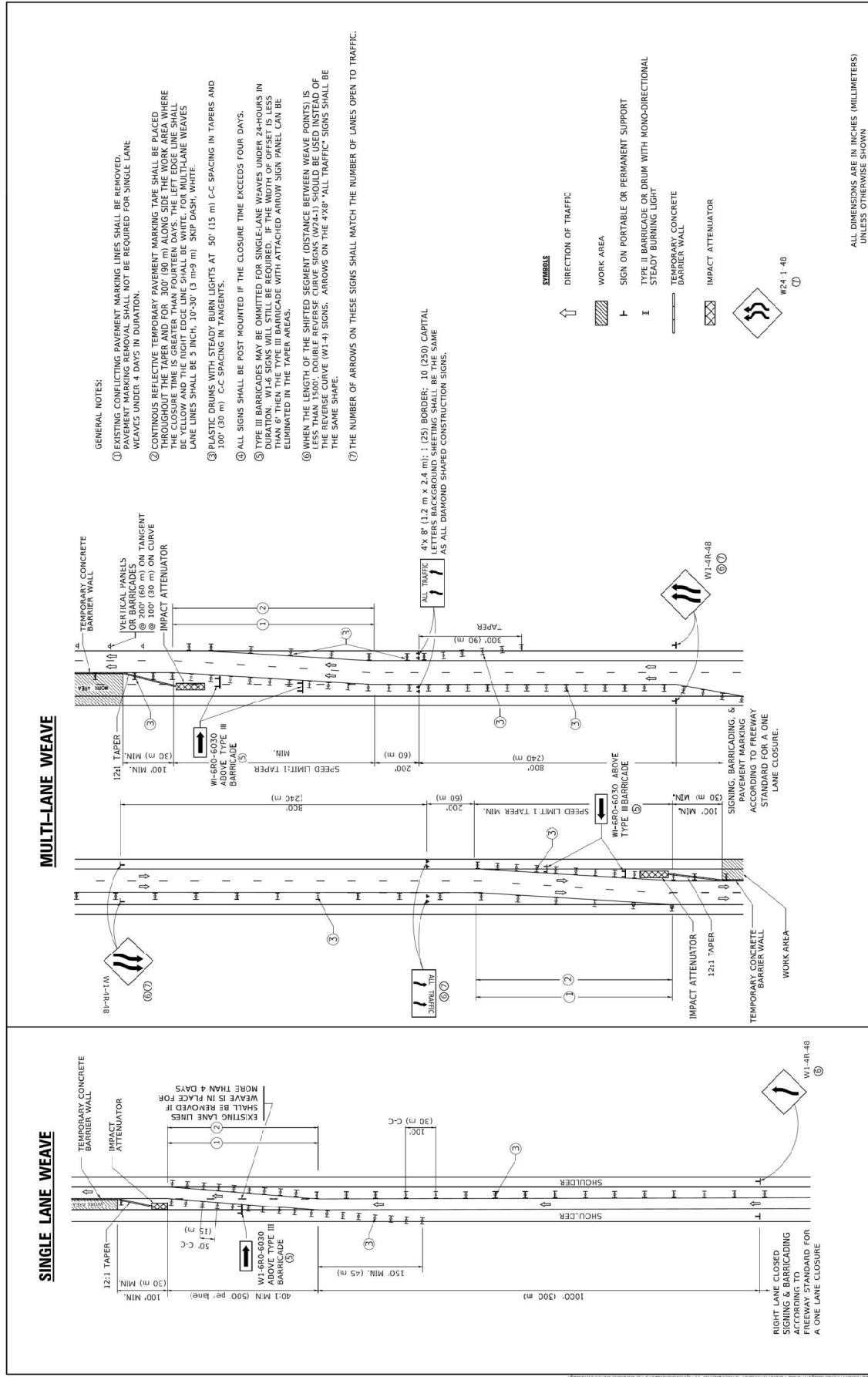
REVISED -
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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

IDOT DISTRICT ONE STANDARDS

STA. TO STA.

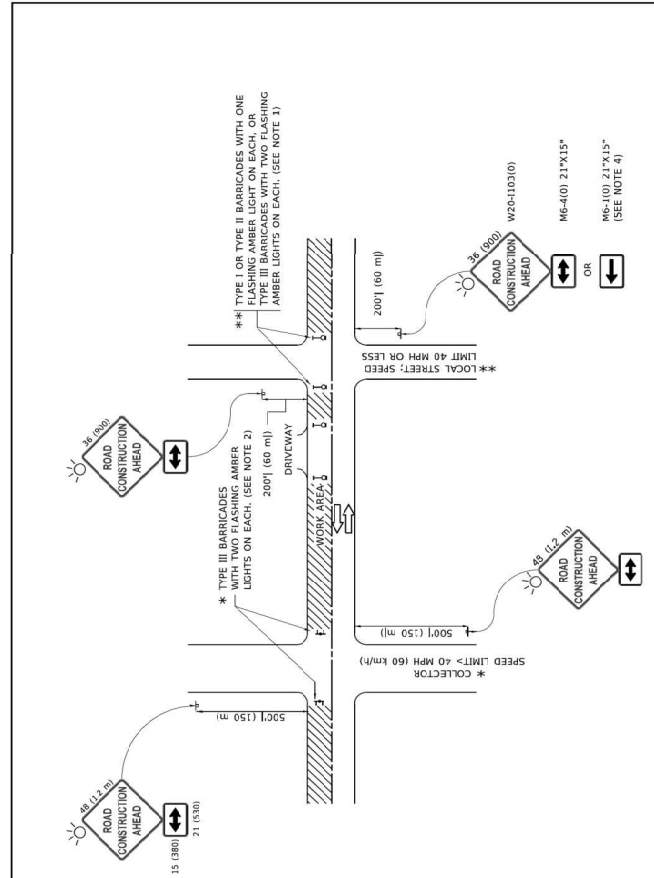
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	60
ILLINOIS FED. AID PROJECT			CONTRACT NO. 61G36	



DESIGNED - D.W.S.	DATE - 02-27	REVISIONS
DRAWN - S.P.A. 01-07	DATE - 12-09	
CHECKED - S.P.A. 12-09	DATE - 02-27	
DATE - 02-27		

TRAFFIC CONTROL DETAILS FOR	TRAFFIC CONTROL DETAILS FOR
FREEWAY SINGLE & MULTI-LANE WEAVE	FREEWAY SINGLE & MULTI-LANE WEAVE
SCALE NONE	SCALE NONE
SHEET 1 OF 1	SHEET 1 OF 1
TO STA.	TO STA.

STATE OF ILLINOIS	DEPARTMENT OF TRANSPORTATION
SECTION	SECTION
CONTRACT NO.	CONTRACT NO.



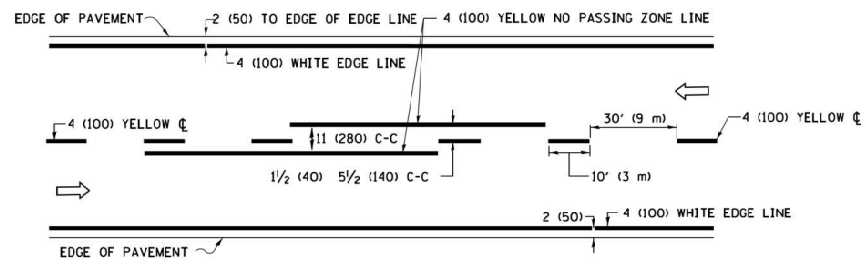
- NOTES:**
- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 KM/H) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE ROAD CONSTRUCTION AHEAD SIGN 36 X 36 (900X900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I OR TYPE II OR TYPE III BARRICADES, 1/3 OF THE CLOSED SECTION OF THE CLOSED PORTION.
 - SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 KM/H) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE ROAD CONSTRUCTION AHEAD SIGN 48 X 48 (1.2 X 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CLOSED SECTION OF THE CLOSED PORTION.
 - CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE HEIGHT.
 - SIGNING AND THE WORK ZONE. A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
5. WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARDS. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET UP.
6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
7. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS SHALL BE IN ACCORDANCE WITH THE STANDARDS AND THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

STATE OF ILLINOIS	DEPARTMENT OF TRANSPORTATION
SECTION	SECTION
CONTRACT NO.	CONTRACT NO.

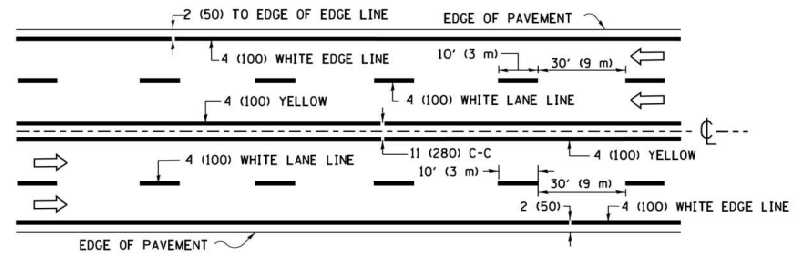
DESIGNED - D.W.S.	DATE - 02-27	REVISIONS
DRAWN - S.P.A. 01-07	DATE - 12-09	
CHECKED - S.P.A. 12-09	DATE - 02-27	
DATE - 02-27		

STATE OF ILLINOIS	DEPARTMENT OF TRANSPORTATION
SECTION	SECTION
CONTRACT NO.	CONTRACT NO.

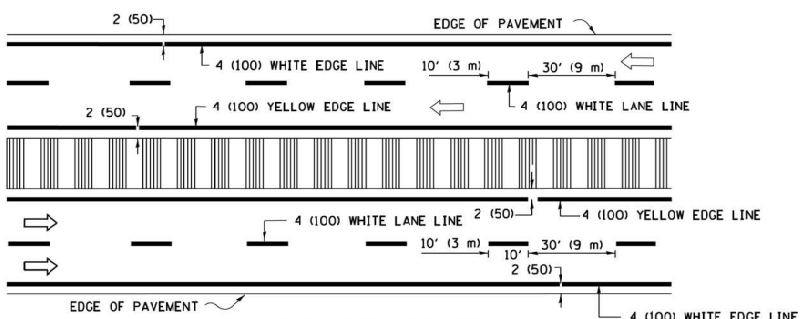
All dimensions are in inches (millimeters) unless otherwise shown.



2-LANE ROADWAY

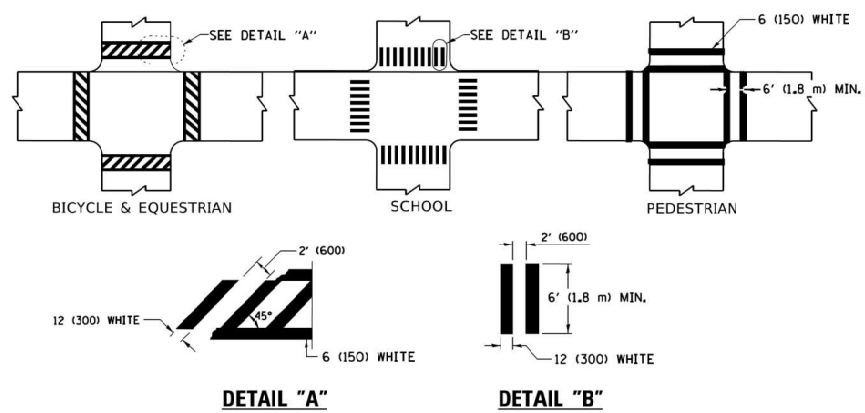


MULTI-LANE UNDIVIDED



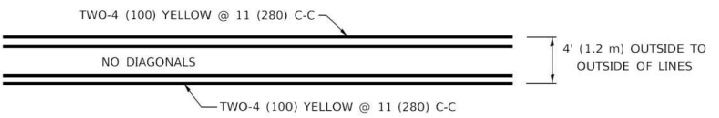
MULTI-LANE DIVIDED WITH MEDIAN

TYPICAL LANE AND EDGE LINE MARKING

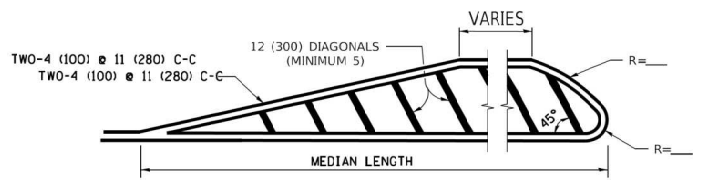


TYPICAL CROSSWALK MARKING

* MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES

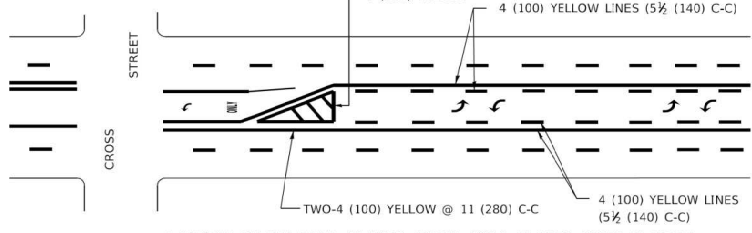


4' (1.2 m) WIDE MEDIANS ONLY



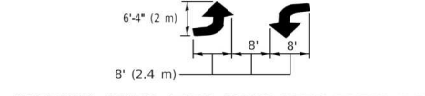
MEDIANS OVER 4' (1.2 m) WIDE

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
 75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)
 150' (45 m) C-C (MORE THAN 45MPH (70 km/h))



MEDIAN WITH TWO-WAY LEFT TURN LANE

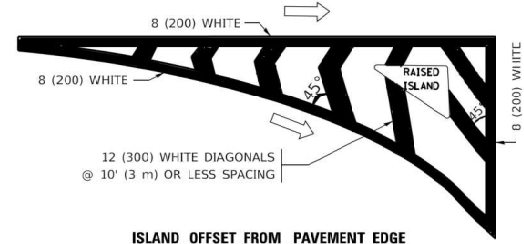
TYPICAL PAINTED MEDIAN MARKING



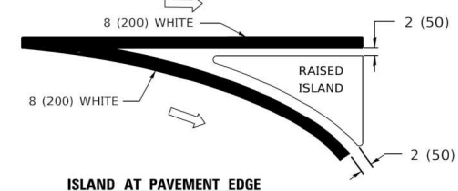
TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
 AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)
 * TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

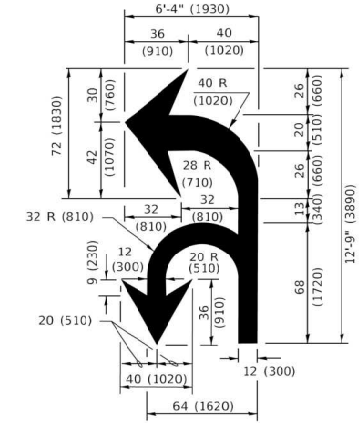


ISLAND OFFSET FROM PAVEMENT EDGE

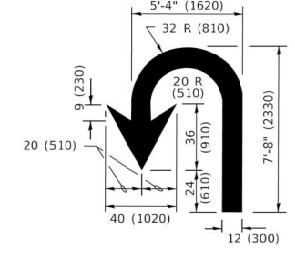


ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING



COMBINATION LEFT AND U-TURN



U-TURN

LANE REDUCTION TRANSITION

* LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MEDIANS IN YELLOW
TURN LANE MARKINGS	6 (150) LINE: FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4 m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH: 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 5' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES: "RR" IS 6' (1.8 m) LETTERS: 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS ≥ 8')	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C 30 MPH (50 km/h) TO 45MPH (70 km/h) 150' (45 m) C-C (OVER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 5F
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 5F

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 61

FILE NAME IDOT-StdDetail.dgn	USER NAME zwallsten	DESIGNED - EVERS	REVISED - C. JUCIUS 09-09-09
5388.800	PLOT SCALE 1:1	DRAWN -	REVISED - C. JUCIUS 07-01-13
IDOT D1 STANDARD TC13	PLOT DATE 9/15/2020	CHECKED -	REVISED - C. JUCIUS 12-21-15
		DATE 03-19-90	REVISED - C. JUCIUS 04-12-16

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TYPICAL PAVEMENT MARKINGS		298	18-00517-00-TL	WILL	72	61
SCALE: NONE		SHEET 1 OF 2 SHEETS		CONTRACT NO. 61G36		
STA. TO STA.		ILLINOIS		FED. AID PROJECT		

FILE NAME
IDOT-StdDetail62.dgn
5388.800
IDOT D1 STANDARD TC14-TC17

USER NAME ■ zwa11sten
DESIGNED -
DRAWN -
PLOT SCALE ■ 1:1
PLOT DATE ■ 9/15/2020

REVISIONS
DESIGNED -
DRAWN -
CHECKED -
DATE -

REVISIONS
REVISED -
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REVISED -
REVISED -

TURN BAY ENTRANCE AT START OF LANE CLOSURE TAPER

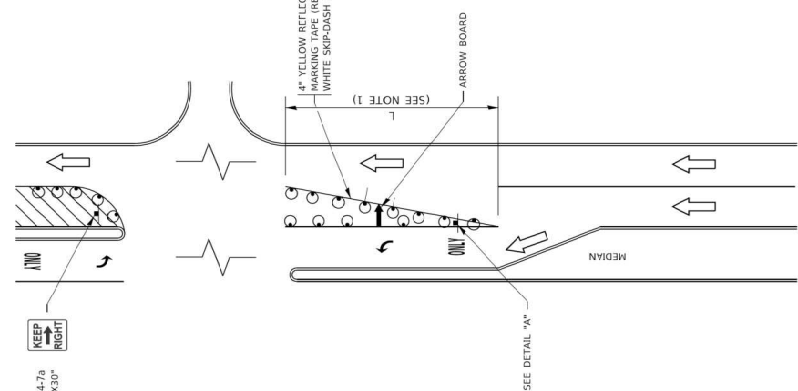


FIGURE 1

TURN BAY ENTRANCE WITHIN A LANE CLOSURE

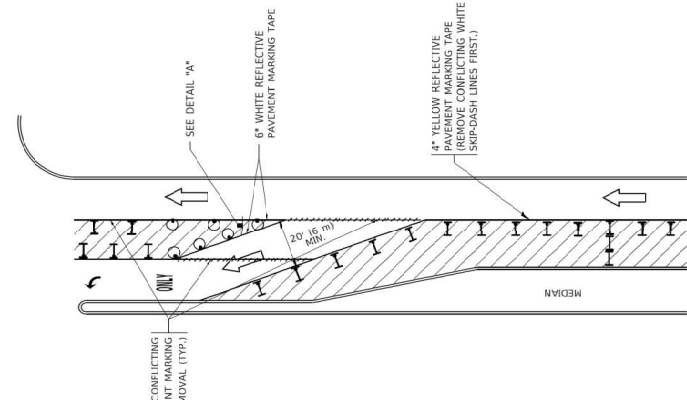
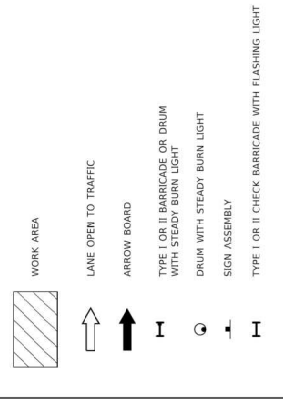


FIGURE 2

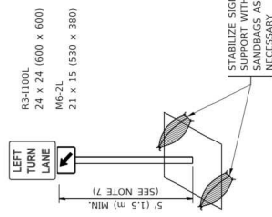
LEGEND



NOTES:

1. WHEN "L" IS ≤ THE STORAGE LENGTH OF THE TURN LANE AS SHOWN IN FIG. 1, USE FIGURE 1.
2. WHEN "L" IS > THE STORAGE LENGTH OF THE TURN LANE OR THE TURN LANE IS WITHIN THE LANE CLOSURE, USE FIGURE 2.
3. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (7.0) IN HEIGHT.
4. LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
5. REFLECTIVE TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED THROUGHOUT THE BARRICADE AREA OF EACH TURN BAY AS SHOWN WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN (14) DAYS.
6. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE TURN BAY UNDER THE FOLLOWING CONDITIONS:
 - a. THIS CONDITION, "RIGHT TURN LANE" BARRICADE 24 X 24 (600 X 600) AND M6-2R 21 X 15 (530 X 380) SHALL BE USED.
 - b. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
 - c. THE SIGNS SHALL BE MOUNTED ABOVE THE BARRICADES/DRUMS ON SEPARATE SIGN SUPPORTS THAT MEET NCHRP 350 OR MASH REQUIREMENTS.
 - d. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

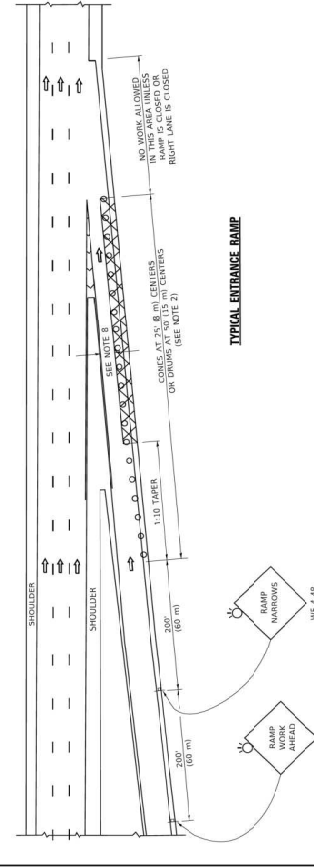
DETAIL A



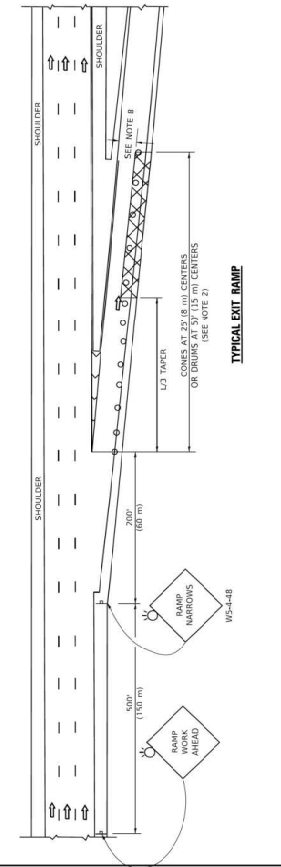
All dimensions are in inches (millimeters) unless otherwise shown.

DESIGNED - T. BAMAUCHER 09-08-04	REVISIONS	DESIGNED - R. BONG 09-14-09	TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)
DRAWN - A. HENDER 11-07-04	REVISED - A. SCHAEZLE 07-07-13	DRAWN - A. SCHAEZLE 07-07-13	SCALE NONE
CHECKED - A. HENDER 10-12-06	REVISED - A. SCHAEZLE 09-15-16	CHECKED - A. SCHAEZLE 09-15-16	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
DATE - 11-08-09	REVISED - T. BAMAUCHER 01-05-09	DATE - 11-08-09	TO STA. FROM STA.

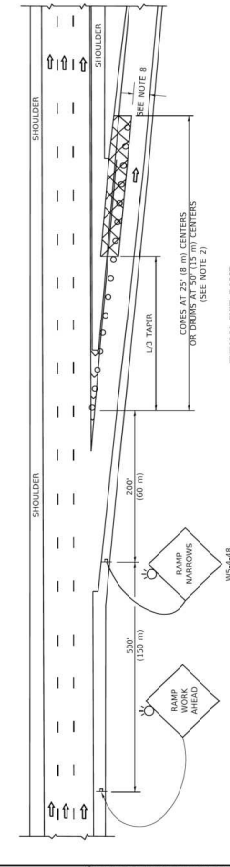
PARTIAL RAMP CLOSURE DETAILS



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP



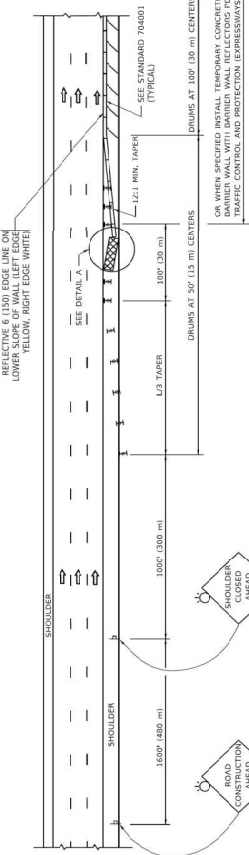
GENERAL NOTES:

1. THE "L" DISTANCE EQUALS:
 - a. 100' (30.5 M) MIN.
 - b. 100' (30.5 M) MIN. PLUS THE LENGTH OF THE TAPER.
 - c. 100' (30.5 M) MIN. PLUS THE LENGTH OF THE TAPER PLUS THE LENGTH OF THE TAPER.
2. THE "W" DISTANCE EQUALS:
 - a. 100' (30.5 M) MIN.
 - b. 100' (30.5 M) MIN. PLUS THE WIDTH OF THE TAPER.
 - c. 100' (30.5 M) MIN. PLUS THE WIDTH OF THE TAPER PLUS THE WIDTH OF THE TAPER.
3. THE "W" DISTANCE SHALL BE USED DURING THE HOUR OF ADVANCE AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

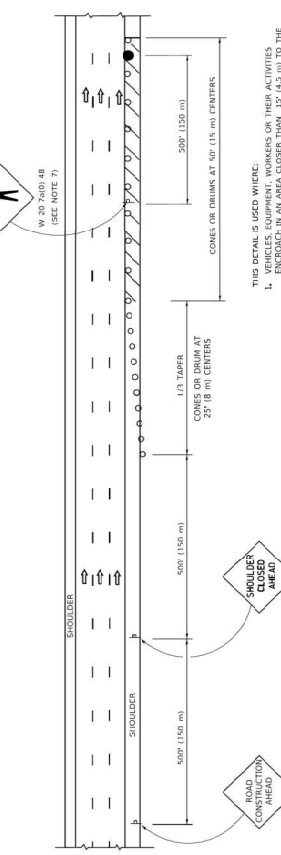
SYMBOLS

- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE B BARRICADE OR DRUM
- CONE, DRUM OR BARRICADE
- IMPACT ATTENUATOR OF TYPE AND TEST LEVEL SPECIFIED

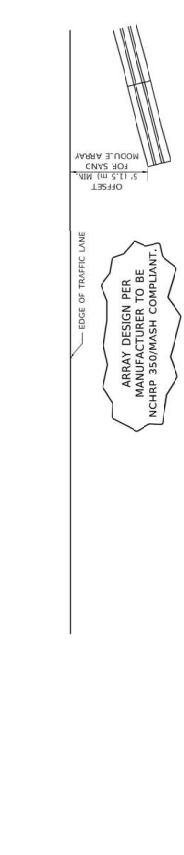
SHOULDER CLOSURE DETAILS



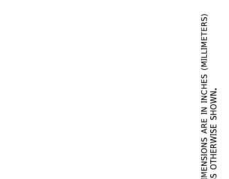
PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE



DETAIL "A" IMPACT ATTENUATOR, TEMPORARY (SEE NOTE 5)



5. THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS INSTALLED AND THE IMPACT ATTENUATOR IS NOT USED. IF OFFSET IS LESS THAN 5 FEET USE ARROW BOARD DEVICE TO MEET REQUIREMENTS.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL TRAFFIC CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE:
 - a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES.
 - b. THE WORK ACTIVITY REQUIRES FREQUENT ENDEAVOUR INTO THE LANE OPEN TO TRAFFIC (APPROXIMATELY 100' (30 M) TO 200' (60 M) IN ADVANCE OF THE WORKERS).
 - c. 12' MIN. WIDTH TANGENT SECTION.
 - d. 15' MIN. WIDTH CURVE SECTION.

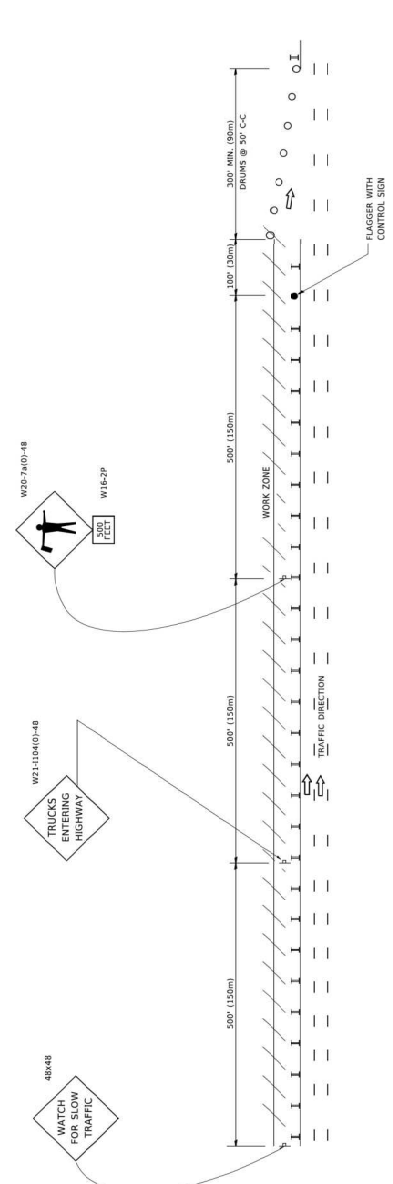
DESIGNED - S.P.A. 01-07	REVISIONS	DESIGNED - S.P.A. 01-07	TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES
DRAWN - D.W.S.	REVISED - S.P.A. 12-09	DRAWN - D.W.S.	SCALE NONE
CHECKED - A.D. 06-13	REVISED - A.D. 06-13	CHECKED - A.D. 06-13	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
DATE - 01-18	REVISED - 01-18	DATE - 01-18	TO STA. FROM STA.

STA. TO STA.

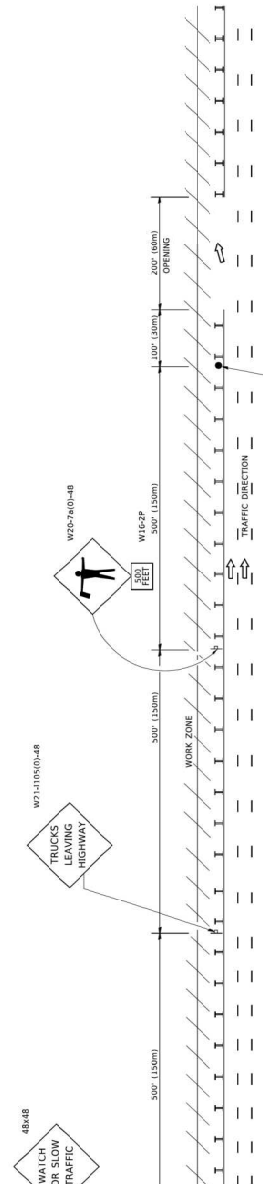
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	62
ILLINOIS FED. AID PROJECT			CONTRACT NO. 61G36	

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENINGS



WORK ZONE ENTRY OPENING



NOTES:

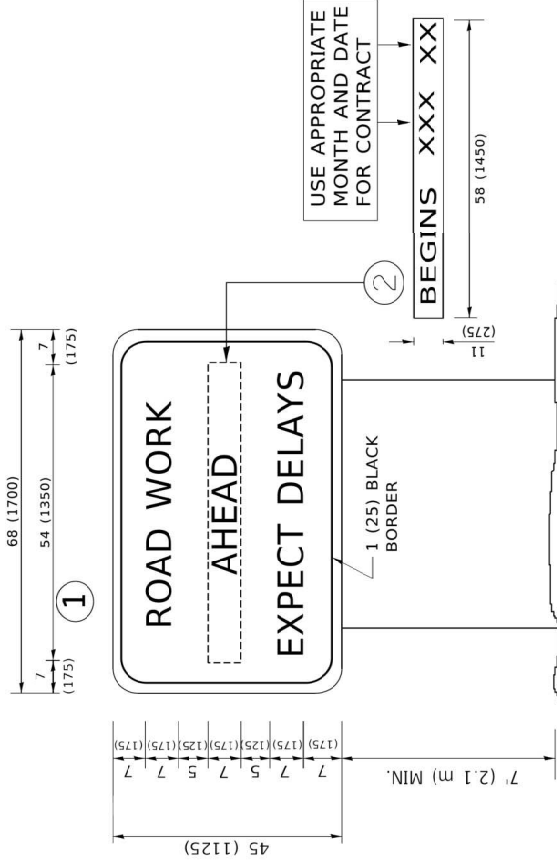
1. ALL SIGNS SHALL BE REMOVED OR TURNED AWAY FROM TRAFFIC AND THE EXIT AND ENTRY OPENINGS SHALL BE CLOSED WHEN THE FLAGGING OPERATION CEASES. NON OPERATING EQUIPMENT SHALL COMPLY WITH ARTICLE 701.11
2. WORK ZONE OPENINGS SHALL BE A MINIMUM OF ONE HALF MILE APART AND A MINIMUM OF ONE QUARTER MILE FROM ALL ENTRANCE AND EXIT RAMP.
3. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A WORK ZONE EXIT OPENING WILL BE PROHIBITED.
4. ALL VEHICLES SHALL ENTER THE WORK ZONE AT ENTRY OPENINGS, USING THEIR TURN SIGNALS TO WARN MOTORISTS
5. FLAGGERS SHALL NOT STOP TRAFFIC OR DIRECT TRAFFIC INTO AN ADJACENT LANE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

USER NAME: zwa11sten	DESIGNED: J.A.H. 02/26	REVISIONS:	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.U. RTE.:	SECTION:	COUNTY:	TOTAL SHEETS:	SHEET NO.:
PLOT SCALE: 1/8" = 1'-0"	CHECKED:	REVISED: S.P.B. 01/27	FREEWAY / EXPRESSWAY SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS ON FREEWAYS / EXPRESSWAYS	298	18-00517-00-TL	WILL	72	63
PLOT DATE: 9/15/2020	DATE:	REVISED: S.P.B. 12/09	DEPARTMENT OF TRANSPORTATION	TO STA.:		CONTRACT NO.:		61G36
		REVISED: M.D.M. 01/13	SCALE: NONE	STA.:		ILLINOIS		FED. AID PROJECT

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

IDOT DISTRICT ONE STANDARDS



NOTES:

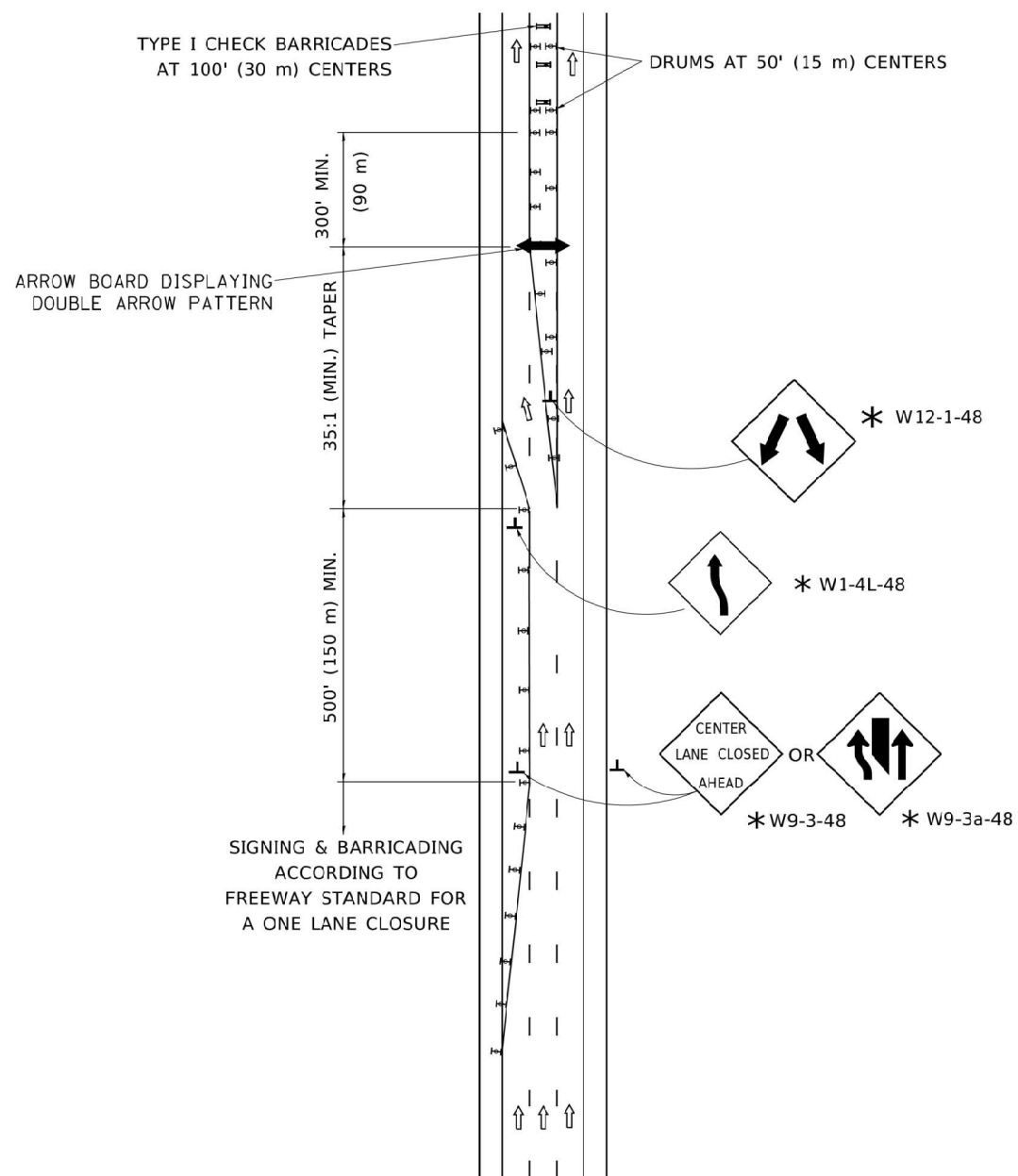
1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

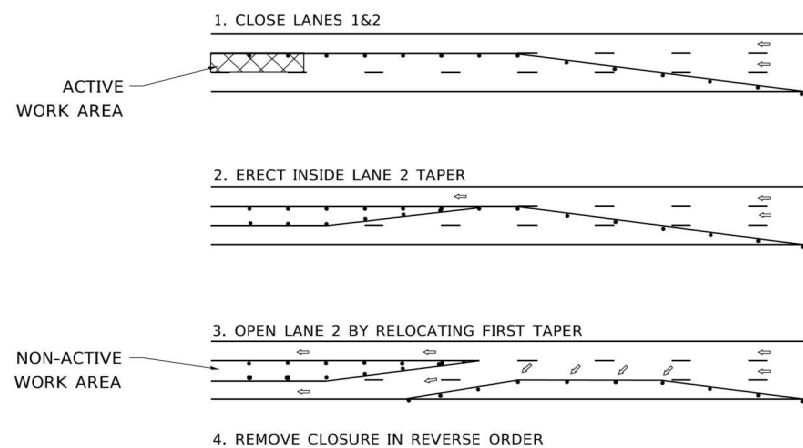
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5388.800	PLOT SCALE: 1:1	DRAWN: -	REVISED: -
IDOT D1 STANDARD TC18-TC22	PLOT DATE: 9/15/2020	CHECKED: -	REVISED: -
		DATE: -	REVISED: -

F.A.U. RTE.:	SECTION:	COUNTY:	TOTAL SHEETS:	SHEET NO.:
298	18-00517-00-TL	WILL	72	63
TO STA.:		CONTRACT NO.:		61G36
STA.:		ILLINOIS		FED. AID PROJECT

CENTER LANE CLOSURE



INSTALLATION SEQUENCE



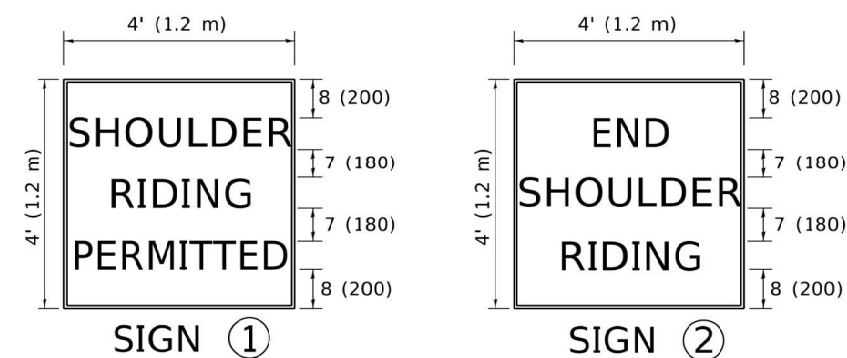
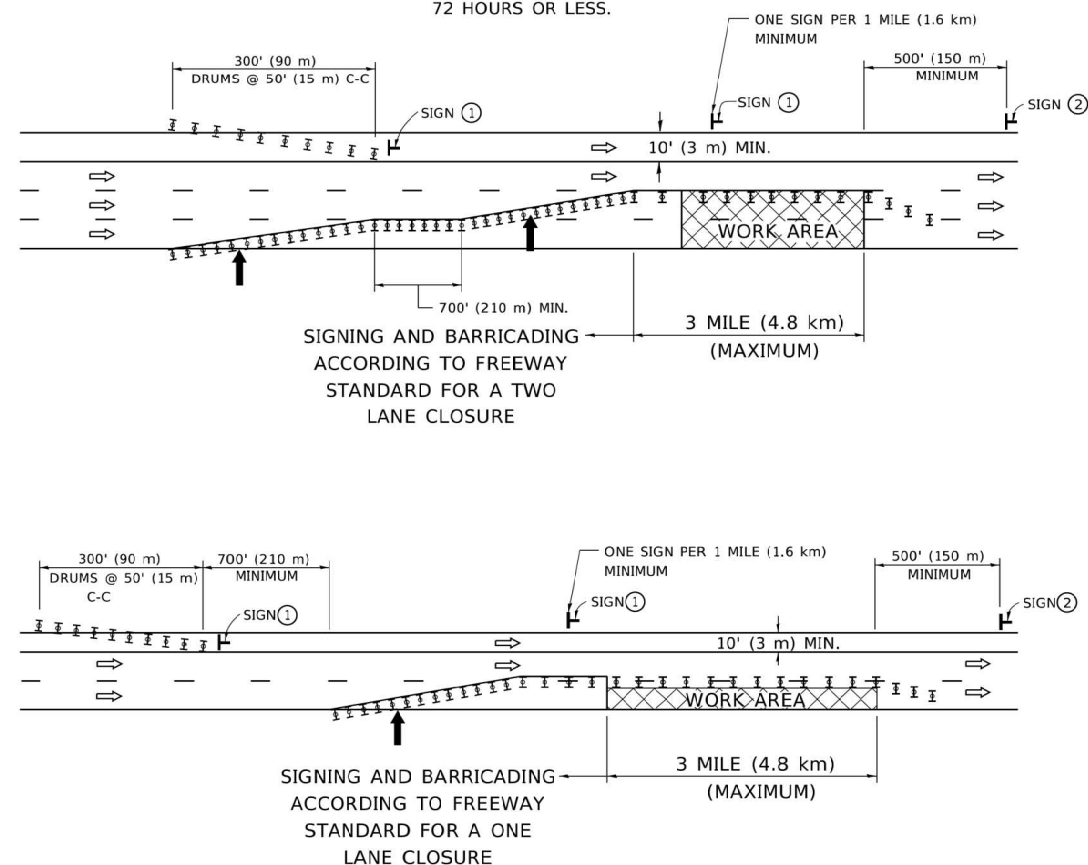
NOTES:

1. DRUMS WITH STEADY BURN LIGHTS SHALL BE USED AT 50' (15 m) CENTERS ON ALL TAPERS AND TANGENTS IN ADVANCE OF WORK AREA.
2. CLOSURE SHALL BE USED ONLY FOR OPERATIONS LASTING 72 HOURS OR LESS.
3. CENTER LANE CLOSURE CONFIGURATION IS NOT TO BE USED WITH WORKERS PRESENT.

SHOULDER LANE

NOTE:

CLOSURE SHALL BE USED ONLY FOR OPERATIONS LASTING 72 HOURS OR LESS.



6 (150) SERIES "C" LEGEND
BLACK LEGEND
WHITE REFLECT. BACKGROUND
1 (25) BORDER

SYMBOLS

- ↑ DIRECTION OF TRAFFIC
- ➔ ARROWBOARD
- ▣ ACTIVE WORK AREA
- ⊥ SIGN ON PORTABLE OR PERMANENT SUPPORT *
- ⊥ TYPE II BARRICADE, OR DRUM WITH MONO-DIRECTIONAL STEADY BURN LIGHT

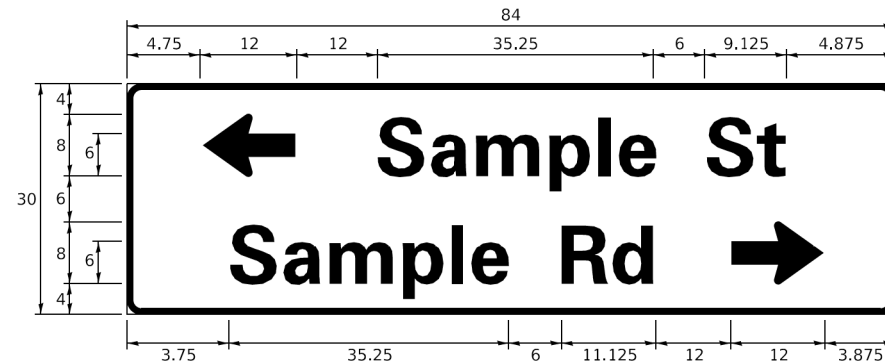
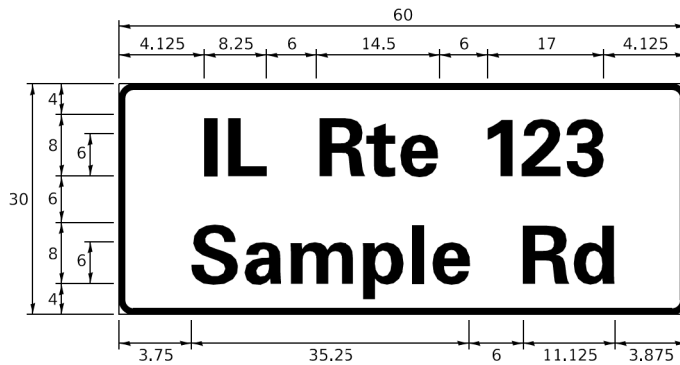
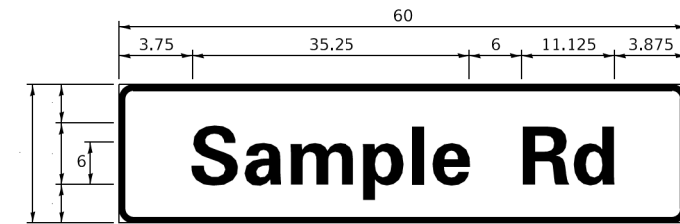
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

* ALL SIGNS SHALL BE MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).

FILE NAME	USER NAME	DESIGNED	REVISED
IDOT-StdDetail.dgn	zwallsten	-	J.A.F. 04-03
5388.800		DRAWN	REVISED
IDOT D1 STANDARD TC25		-	S.P.B. 01-07
	PLOT SCALE	CHECKED	REVISED
	1:1	-	S.P.B. 12-09
	PLOT DATE	DATE	REVISED
	9/15/2020	-	-

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	64
TC-25			CONTRACT NO. 61G36	
ILLINOIS FED. AID PROJECT				

SIGN PANEL – TYPE 1 OR TYPE 2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D OR C	-	1 OR 2	ZZ	-

COMMON STREET NAME ABBREVIATIONS AND WIDTHS

NAME	ABBREVIATION	WIDTH (INCH)	
		SERIES "C"	SERIES "D"
AVENUE	Ave	15.000	18.250
BOULEVARD	Blvd	17.125	20.000
CIRCLE	Cir	11.125	13.000
COURT	Ct	8.250	9.625
DRIVE	Dr	8.625	10.125
HIGHWAY	Hwy	18.375	22.000
ILLINOIS	IL	7.000	8.250
LANE	Ln	9.125	10.750
PARKWAY	Pkwy	23.375	27.375
PLACE	Pl	7.125	7.750
ROAD	Rd	9.625	11.125
ROUTE	Rte	12.625	14.500
STREET	St	8.000	9.125
TERRACE	Ter	12.625	14.625
TRAIL	Tr	7.750	9.125
UNITED STATES	US	10.375	12.250

GENERAL NOTES

- WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 877001, 877002, 877006, 877011 AND 877012. AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 8'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
- ALL SIGNS SHALL CONSIST OF A WHITE LEGEND AND BORDER (TYPE ZZ SHEETING) ON A GREEN BACKGROUND (TYPE ZZ SHEETING)
- THE SIGN LENGTH SHALL BE IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHALL NOT EXCEED 8'-0". ALL BORDERS IF POSSIBLE, BUT MAY BE REDUCED TO 5" WHEN SPACING IS CRITICAL. A MINIMUM OF 2-1/2" SHALL BE INCLUDED BETWEEN THE WORD AND THE RIGHT AND LEFT EDGES OF THE SIGN.
- A PREFERRED METHOD FOR THE SIGN DESIGN IS TO USE SERIES "D" LETTER ON A ONE-LINE SIGN 18" IN HEIGHT AND A MAXIMUM OF 8'-0" IN WIDTH. IF SERIES "D" DOES NOT FIT ON A 8'-0" SIGN, THEN SERIES "C" SHOULD BE TRIED. IF SERIES "C" DOES NOT FIT ON A 8'-0" SIGN, A 30" HIGH TWO-LINE SIGN CAN BE USED. THE CROSSROAD DESIGNATION AS TO STREET, AVENUE, ETC. SHOULD BE SPELLED OUT ON THE SECOND LINE, IF THE ABBREVIATION CANNOT FIT ON THE FIRST LINE.
- LED ILLUMINATED STREET NAME SIGNS CAN BE USED IN PLACE OF REGULAR SIGN PANELS BUT ANY SPECIAL WORDING AND SYMBOLOGY MUST BE APPROVED BY THE DEPARTMENT. GENERAL DESIGN REQUIREMENT AS LISTED ABOVE (COLOR, FONT, SIZE, ETC.) MUST BE FOLLOWED.
- SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS.

LOCAL SUPPLIERS:

- J.O. HERBERT COMPANY, INC
MIDLOTHIAN, VA
- WESTERN REMAC, INC.
WOODRIDGE, IL

PARTS LISTING:

- SIGN CHANNEL PART #HPN053 (MED. CHANNEL)
- SIGN SCREWS 1/4" x 14 x 1" H.W.H. #3
- BRACKETS SELF TAPPING WITH NEOPRENE WASHER
- CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING PART #HPN034 (UNIVERSAL)

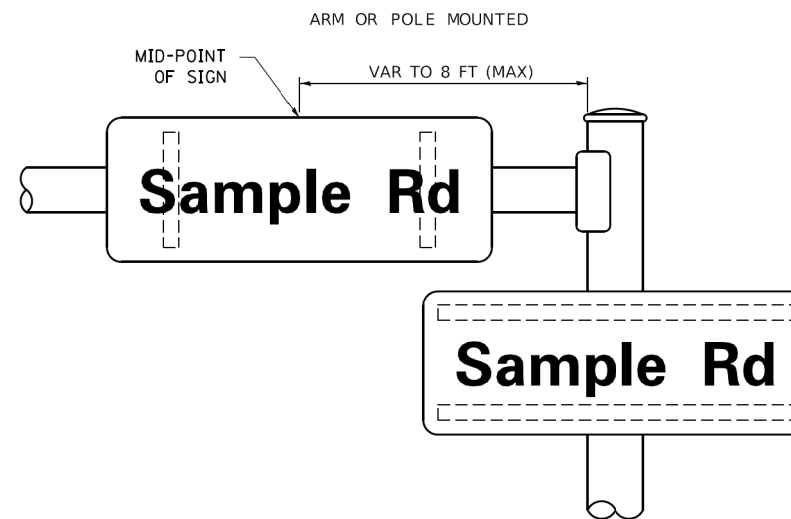
OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BACKET OF THE ABOVE PRODUCT.

STANDARD ALPHABETS SPACING CHART

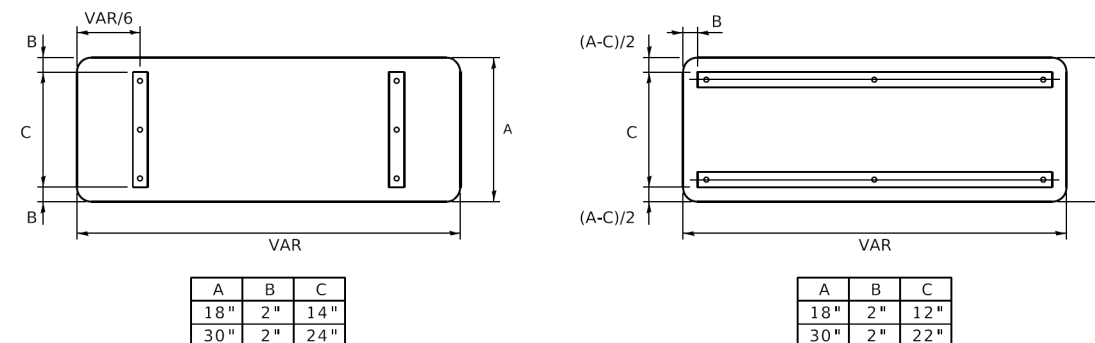
(8") UPPER CASE AND (6") LOWER CASE

CHARACTER	FHWA SERIES "C"			CHARACTER	FHWA SERIES "D"		
	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)		LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)
A	0.240	5.122	0.240	A	0.240	6.804	0.240
B	0.880	4.482	0.480	B	0.960	5.446	0.400
C	0.720	4.482	0.720	C	0.800	5.446	0.800
D	0.880	4.482	0.720	D	0.960	5.446	0.800
E	0.880	4.082	0.480	E	0.960	4.962	0.400
F	0.880	4.082	0.240	F	0.960	4.962	0.240
G	0.720	4.482	0.720	G	0.800	5.446	0.800
H	0.880	4.482	0.880	H	0.960	5.446	0.960
I	0.880	1.120	0.880	I	0.960	1.280	0.960
J	0.240	4.082	0.880	J	0.240	5.122	0.960
K	0.880	4.482	0.480	K	0.960	5.604	0.400
L	0.880	4.082	0.240	L	0.960	4.962	0.240
M	0.880	5.284	0.880	M	0.960	6.244	0.960
N	0.880	4.482	0.880	N	0.960	5.446	0.960
O	0.720	4.722	0.720	O	0.800	5.684	0.800
P	0.880	4.482	0.720	P	0.960	5.446	0.240
Q	0.720	4.722	0.720	Q	0.800	5.684	0.800
R	0.880	4.482	0.480	R	0.960	5.446	0.400
S	0.480	4.482	0.480	S	0.400	5.446	0.400
T	0.240	4.082	0.240	T	0.240	4.962	0.240
U	0.880	4.482	0.880	U	0.960	5.446	0.960
V	0.240	4.962	0.240	V	0.240	6.084	0.240
W	0.240	6.084	0.240	W	0.240	7.124	0.240
X	0.240	4.722	0.240	X	0.400	5.446	0.400
Y	0.240	5.122	0.240	Y	0.240	6.884	0.240
Z	0.480	4.482	0.480	Z	0.400	5.446	0.400
a	0.320	3.842	0.640	a	0.400	4.562	0.720
b	0.720	4.082	0.480	b	0.800	4.802	0.480
c	0.480	4.002	0.240	c	0.480	4.722	0.240
d	0.480	4.082	0.720	d	0.480	4.802	0.800
e	0.480	4.082	0.320	e	0.480	4.722	0.320
f	0.320	2.480	0.160	f	0.320	2.882	0.160
g	0.480	4.082	0.720	g	0.480	4.802	0.800
h	0.720	4.082	0.640	h	0.800	4.722	0.720
i	0.720	1.120	0.720	i	0.800	1.280	0.800
j	0.000	2.320	0.720	j	0.000	2.642	0.800
k	0.720	4.322	0.160	k	0.800	5.122	0.160
l	0.720	1.120	0.720	l	0.800	1.280	0.800
m	0.720	6.724	0.640	m	0.800	7.926	0.720
n	0.720	4.082	0.640	n	0.800	4.722	0.720
o	0.480	4.082	0.480	o	0.480	4.882	0.480
p	0.720	4.082	0.480	p	0.800	4.802	0.480
q	0.480	4.082	0.720	q	0.480	4.802	0.800
r	0.720	2.642	0.160	r	0.800	3.042	0.160
s	0.320	3.362	0.240	s	0.320	3.762	0.240
t	0.080	2.882	0.080	t	0.080	3.202	0.080
u	0.640	4.082	0.720	u	0.720	4.722	0.800
v	0.160	4.722	0.160	v	0.160	5.684	0.160
w	0.160	7.524	0.160	w	0.160	9.046	0.160
x	0.000	5.202	0.000	x	0.000	6.244	0.000
y	0.160	4.962	0.160	y	0.160	6.004	0.160
z	0.240	3.362	0.240	z	0.240	4.002	0.240
1	0.720	1.680	0.880	1	0.800	2.000	0.960
2	0.480	4.482	0.480	2	0.800	5.446	0.800
3	0.480	4.482	0.480	3	1.440	5.446	0.800
4	0.240	4.962	0.720	4	0.160	6.004	0.960
5	0.480	4.482	0.480	5	0.800	5.446	0.800
6	0.720	4.482	0.720	6	0.800	5.446	0.800
7	0.240	4.482	0.720	7	0.560	5.446	0.560
8	0.480	4.482	0.480	8	0.800	5.446	0.800
9	0.480	4.482	0.480	9	0.800	5.446	0.800
0	0.720	4.722	0.720	0	0.800	5.684	0.800
-	0.240	2.802	0.240	-	0.240	2.802	0.240

MOUNTING LOCATION



SUPPORTING CHANNELS



GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 65

FILE NAME = IDOT-StdDetails.dgn	USER NAME = zwallsten	DESIGNED - LP/IP	REVISED - LP 07/01/2015
5388.800	PLOT SCALE = 1:2	DRAWN - LP	REVISED -
IDOT D1 STANDARD TS02	PLOT DATE = 8/20/2020	CHECKED - IP	REVISED -
		DATE - 10/01/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE			
MAST ARM MOUNTED STREET NAME SIGNS			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.U. RTE. 298	SECTION 18-00517-00-TL	COUNTY WILL	TOTAL SHEETS 72	SHEET NO. 65
TS-02		CONTRACT NO. 61G36		
ILLINOIS FED. AID PROJECT				

TRAFFIC SIGNAL LEGEND

(NOT TO SCALE)

ITEM	EXISTING	PROPOSED	ITEM	EXISTING	PROPOSED	ITEM	EXISTING	PROPOSED
CONTROLLER CABINET			HANDHOLE -SQUARE -ROUND	 	 	SIGNAL HEAD -(P) PROGRAMMABLE SIGNAL HEAD		
COMMUNICATION CABINET			HEAVY DUTY HANDHOLE -SQUARE -ROUND	 	 	SIGNAL HEAD WITH BACKPLATE -(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE		
MASTER CONTROLLER			DOUBLE HANDHOLE			PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS		
MASTER MASTER CONTROLLER			JUNCTION BOX			PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER		
UNINTERRUPTABLE POWER SUPPLY			RAILROAD CANTILEVER MAST ARM			ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"		
SERVICE INSTALLATION -(P) POLE MOUNTED			RAILROAD FLASHING SIGNAL			NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED		
SERVICE INSTALLATION -(G) GROUND MOUNTED -(GM) GROUND MOUNTED METERED	 	 	RAILROAD CROSSING GATE			GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)		
TELEPHONE CONNECTION			RAILROAD CROSSBUCK			ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1/C		
STEEL MAST ARM ASSEMBLY AND POLE			RAILROAD CONTROLLER CABINET			COAXIAL CABLE		
ALUMINUM MAST ARM ASSEMBLY AND POLE			UNDERGROUND CONDUIT (UC), GALVANIZED STEEL			VENDOR CABLE		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE			TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE			COPPER INTERCONNECT CABLE, NO. 18, 3 PAIR TWISTED, SHIELDED		
SIGNAL POST -(BM) BARREL MOUNTED - TEMPORARY			SYSTEM ITEM			FIBER OPTIC CABLE -NO. 62.5/125, MM12F -NO. 62.5/125, MM12F SM12F -NO. 62.5/125, MM12F SM24F		
WOOD POLE			INTERSECTION ITEM			GROUND ROD -(C) CONTROLLER -(M) MAST ARM -(P) POST -(S) SERVICE		
GUY WIRE			REMOVE ITEM					
SIGNAL HEAD			RELOCATE ITEM					
SIGNAL HEAD WITH BACKPLATE			ABANDON ITEM					
SIGNAL HEAD OPTICALLY PROGRAMMED			CONTROLLER CABINET AND FOUNDATION TO BE REMOVED					
FLASHER INSTALLATION -(FS) SOLAR POWERED	 	 	MAST ARM POLE AND FOUNDATION TO BE REMOVED					
PEDESTRIAN SIGNAL HEAD			SIGNAL POST AND FOUNDATION TO BE REMOVED					
PEDESTRIAN PUSH BUTTON -(APS) ACCESSIBLE PEDESTRIAN PUSH BUTTON			DETECTOR LOOP, TYPE I					
RADAR DETECTION SENSOR			PREFORMED DETECTOR LOOP					
VIDEO DETECTION CAMERA			SAMPLING (SYSTEM) DETECTOR					
RADAR/VIDEO DETECTION ZONE			INTERSECTION AND SAMPLING (SYSTEM) DETECTOR					
PAN, TILT, ZOOM (PTZ) CAMERA			QUEUE AND SAMPLING (SYSTEM) DETECTOR					
EMERGENCY VEHICLE LIGHT DETECTOR			WIRELESS DETECTOR SENSOR					
CONFIRMATION BEACON			WIRELESS ACCESS POINT					
WIRELESS INTERCONNECT								
WIRELESS INTERCONNECT RADIO REPEATER								

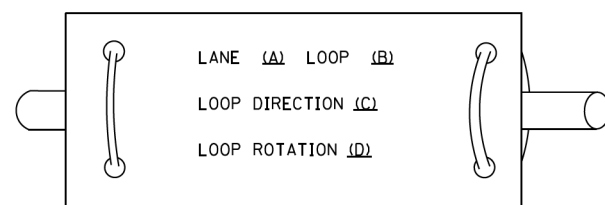
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IDOT-StdDetails.dgn		DRAWN - IP	REVISED -
5388.800	PLOT SCALE = 1:2	CHECKED - LP	REVISED -
IDOT D1 STANDARD TS05a	PLOT DATE = 8/20/2020	DATE - 9/29/2016	REVISED -

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	66
TS-05		CONTRACT NO. 61G36		
ILLINOIS FED. AID PROJECT				

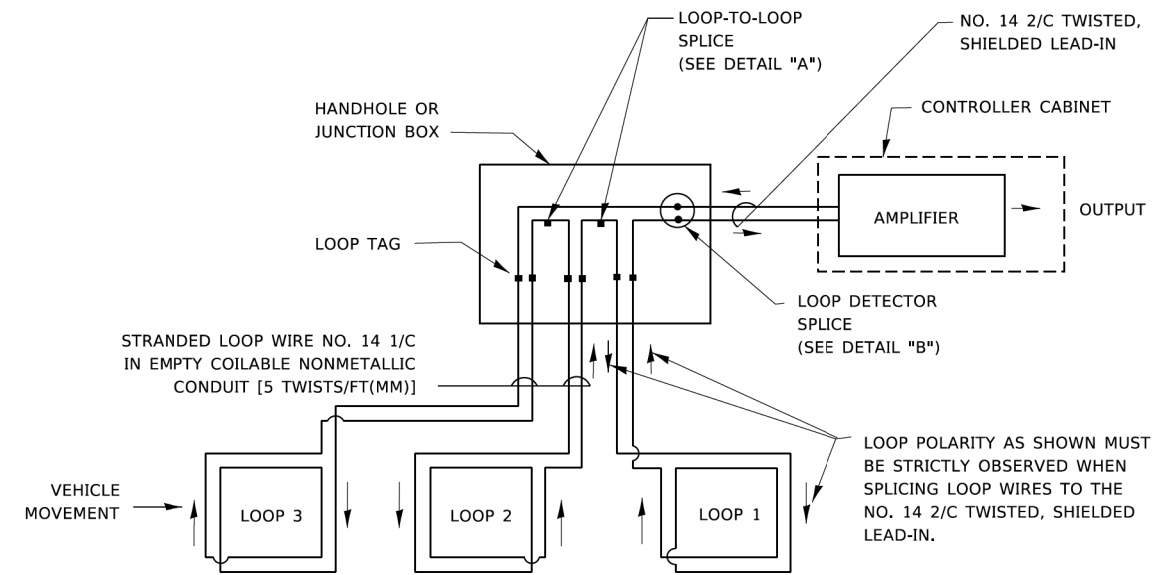
LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVESHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

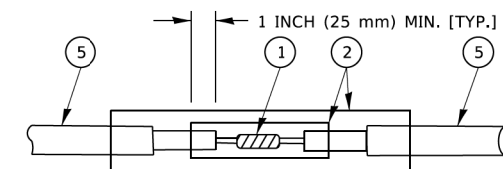


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

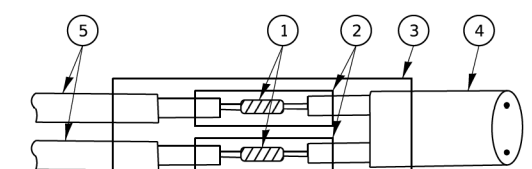


DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES. SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE,
- THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

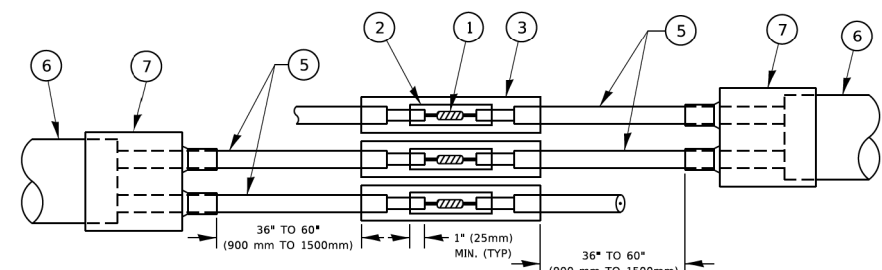


DETAIL "A"
LOOP-TO-LOOP SPLICE

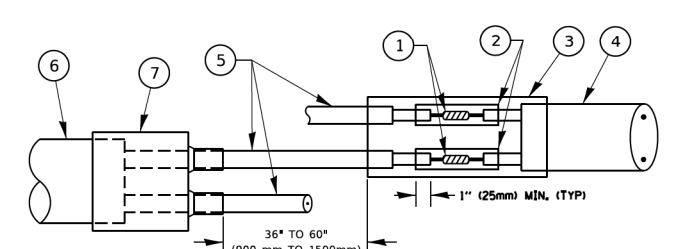


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

PREFORMED LOOP

LOOP DETECTOR SPLICE

- 1 WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. THE WESTERN UNION SPLICES SHALL BE STAGGERED.
- 2 WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- 3 WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- 4 NO. 14 2/C TWISTED, SHIELDED CABLE.
- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE. PREFORMED LOOP
- 6 XL POLYOLEFIN 2 CONDUCTOR
- 7 BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 67

FILE NAME = IDOT-StdDetails.dgn	USER NAME = zwallsten	DESIGNED -	REVISED -
5388.800	PLOT SCALE = 1:2	DRAWN -	REVISED -
IDOT D1 STANDARD TS05b	PLOT DATE = 8/20/2020	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

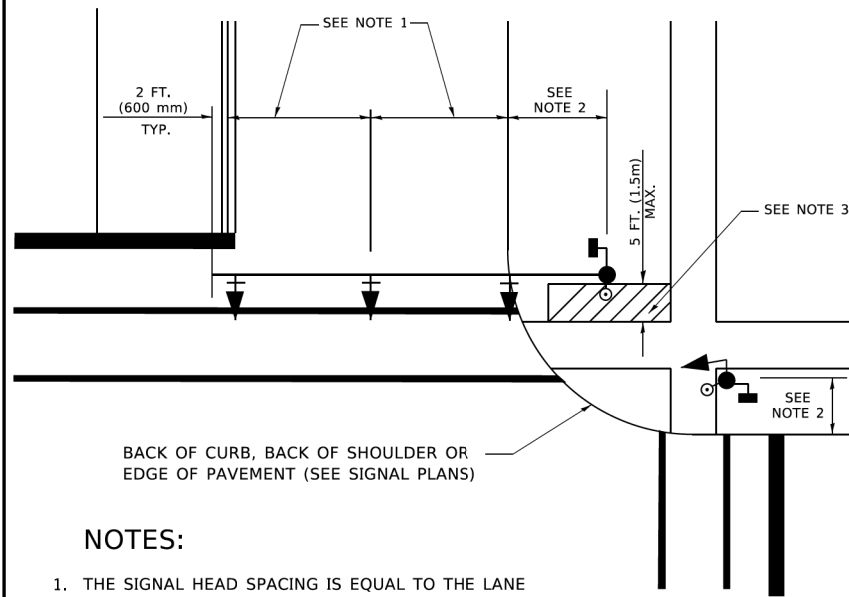
DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE SHEET 2 OF 7 SHEETS STA. TO STA.

F.A.U. RTE. 298	SECTION 18-00517-00-TL	COUNTY WILL	TOTAL SHEETS 72	SHEET NO. 67
TS-05		CONTRACT NO. 61G36		
ILLINOIS FED. AID PROJECT				

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

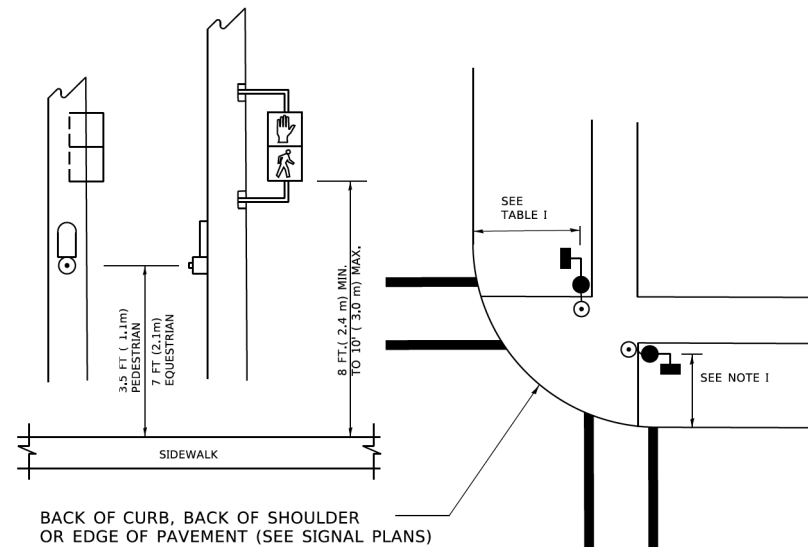
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

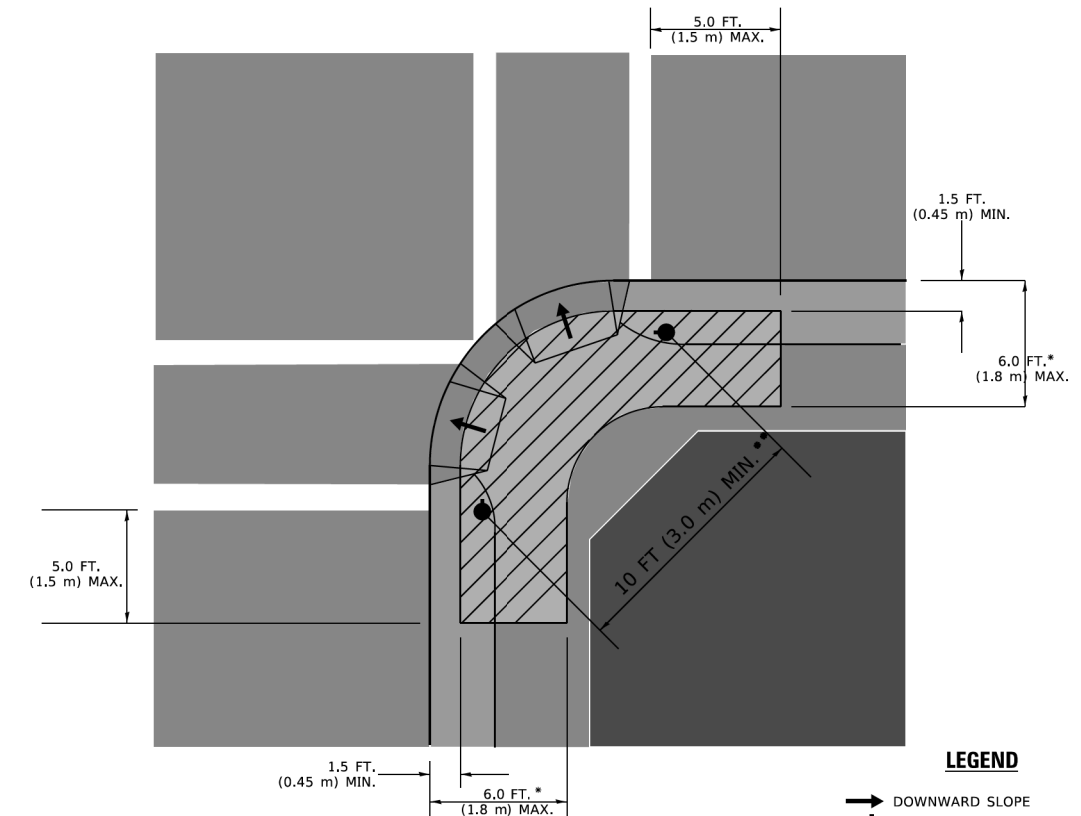
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

RECOMMENDED PUSHBUTTON LOCATIONS



LEGEND

- DOWNWARD SLOPE
- PEDESTRIAN PUSHBUTTON
- ▨ RECOMMENDED PUSHBUTTON LOCATIONS

- * WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- ** WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

TRAFFIC SIGNAL EQUIPMENT OFFSET

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.5m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.5m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.5m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.5m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.5m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.3m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.3m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

NOTES:

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 68

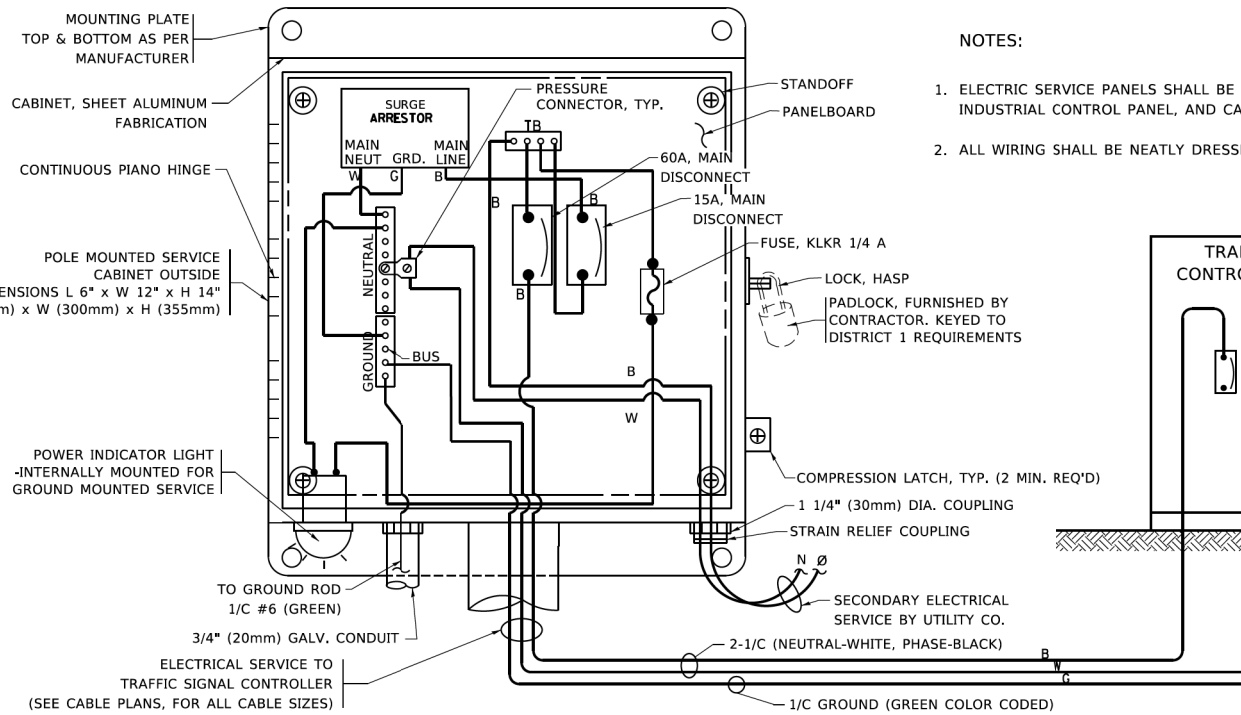
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		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

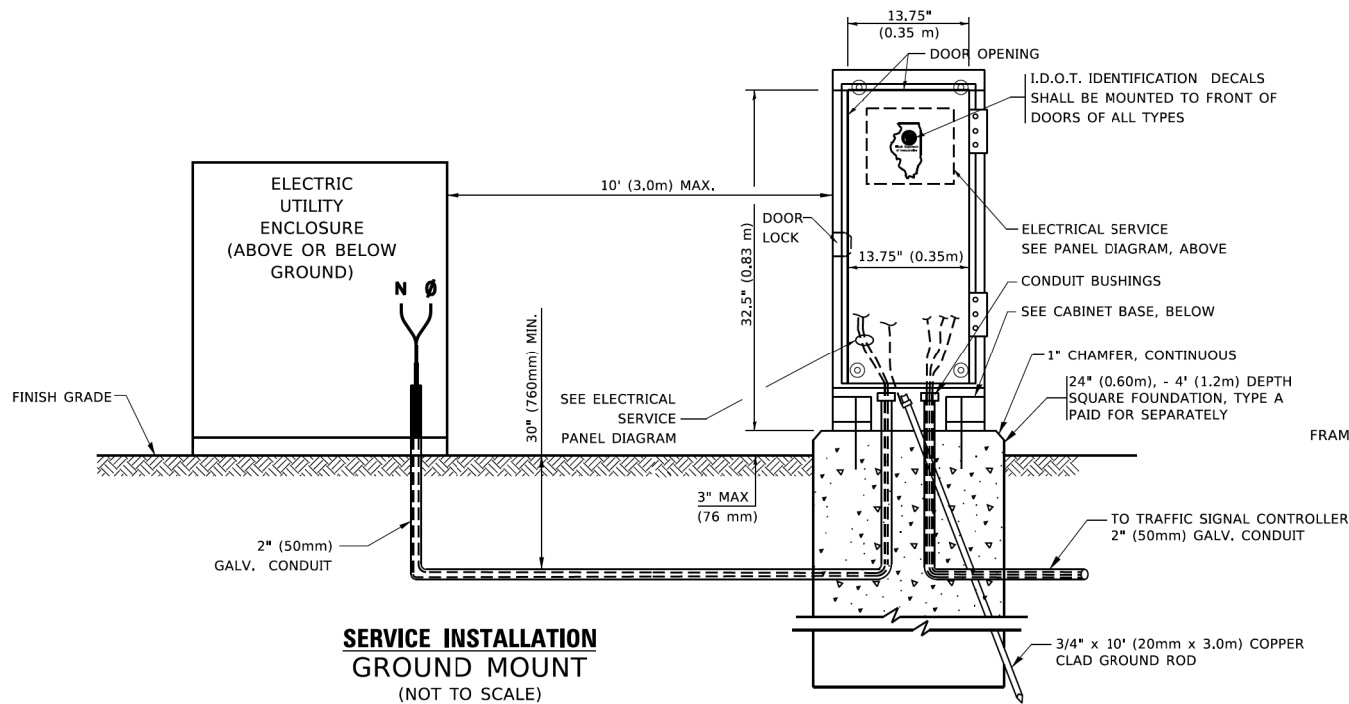
**DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: NONE SHEET 3 OF 7 SHEETS STA. TO STA.

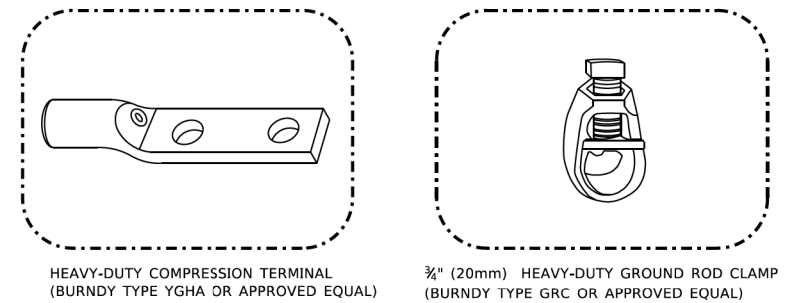
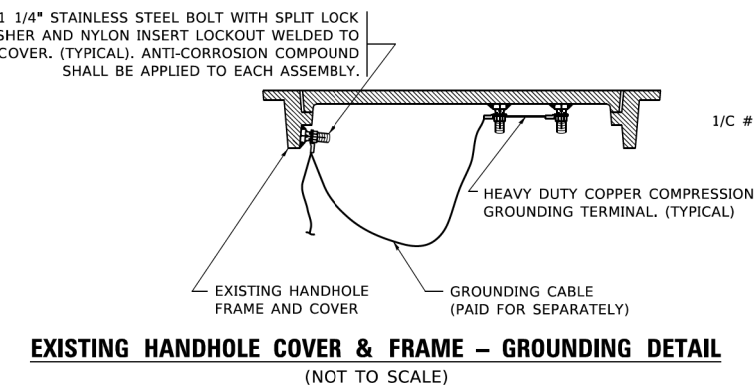
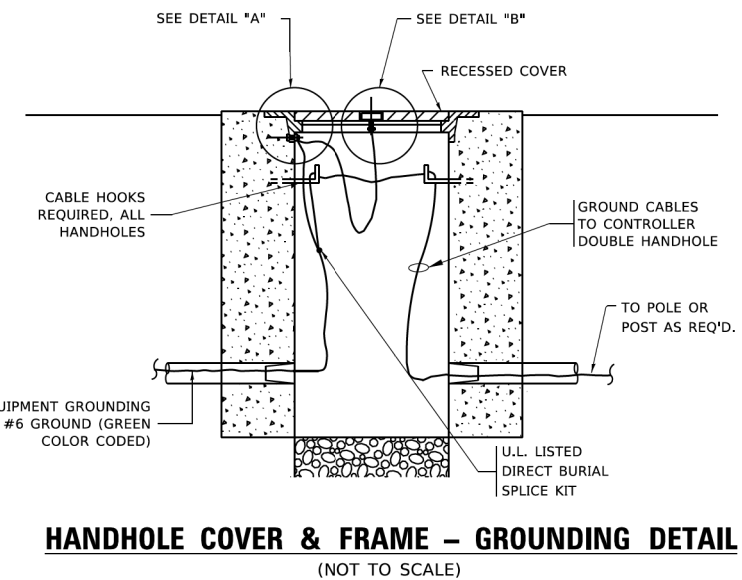
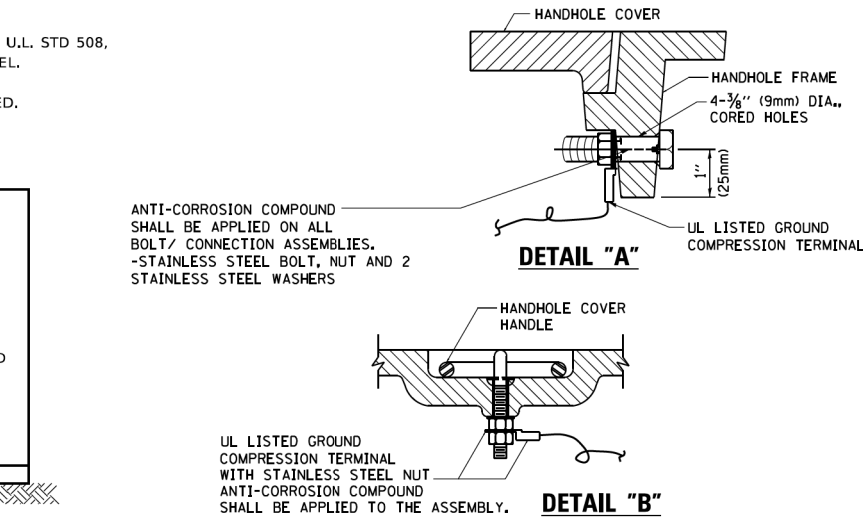
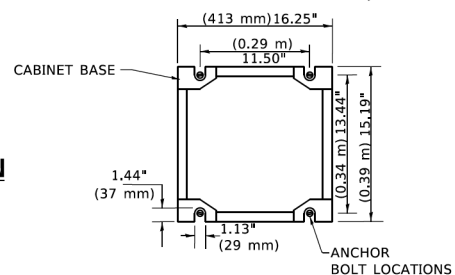
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TS-05		CONTRACT NO. 61G36		
ILLINOIS FED. AID PROJECT				



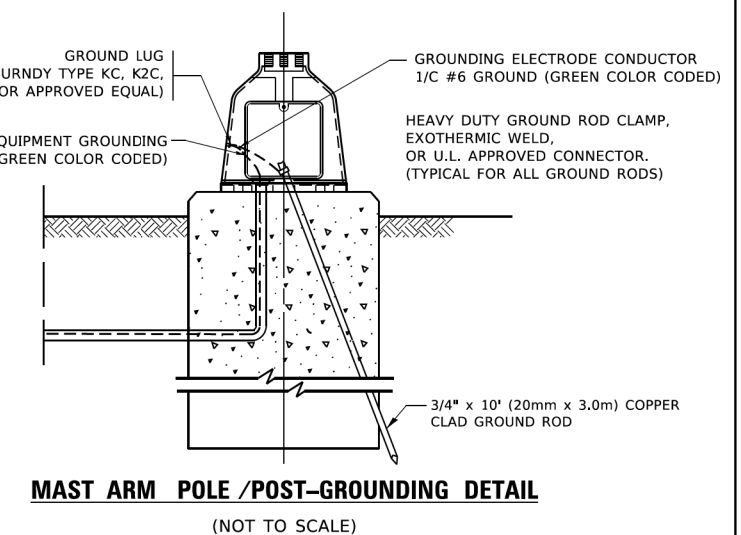
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)



CABINET - BASE BOLT PATTERN
 (NOT TO SCALE)



- NOTES:**
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
 - GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES
 - 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES
 - 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES.
 - 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



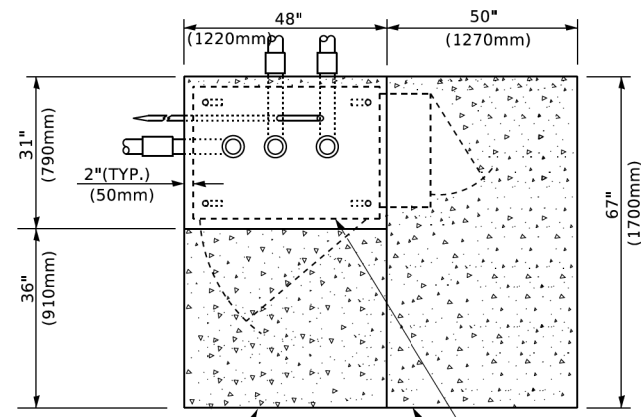
GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 69

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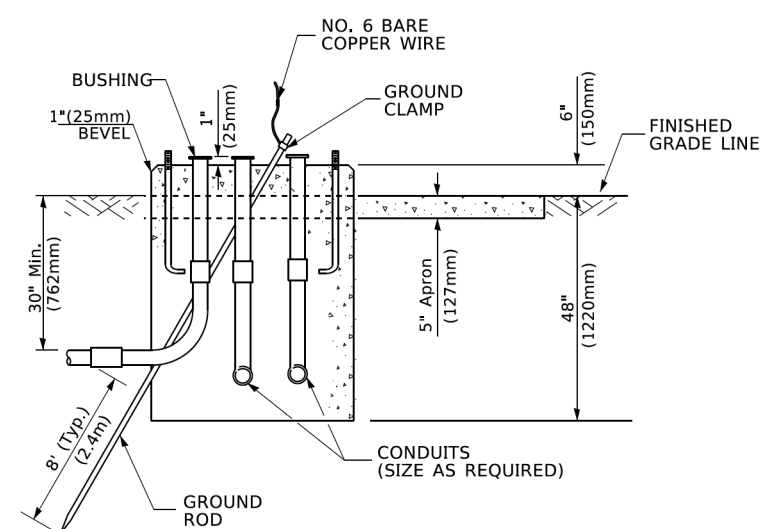
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DISTRICT ONE			
STANDARD TRAFFIC SIGNAL DESIGN DETAILS			
SCALE: NONE	SHEET 4	OF 7 SHEETS	STA. TO STA.

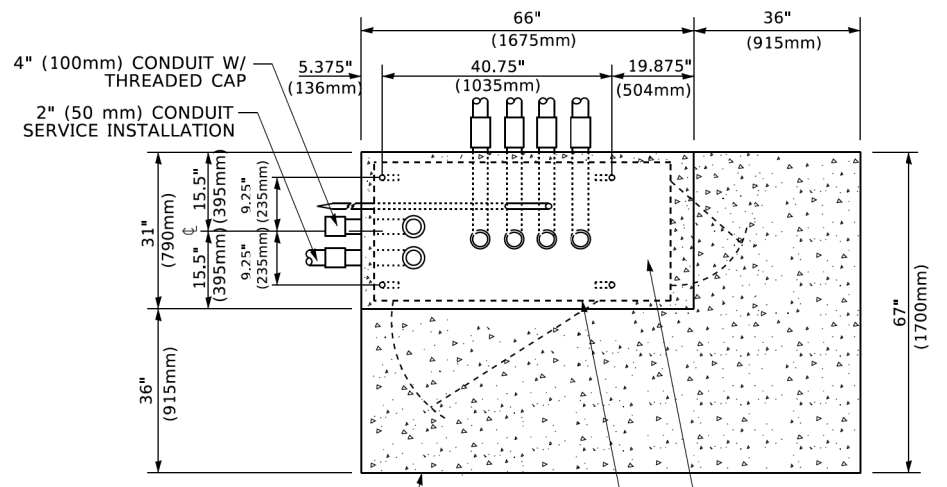
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298	18-00517-00-TL	WILL	72	69
TS-05		CONTRACT NO. 61G36		
ILLINOIS		FED. AID PROJECT		



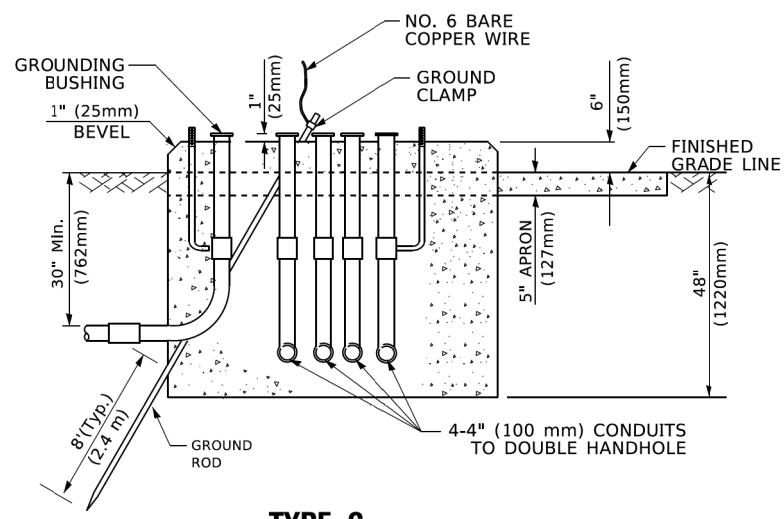
TOP VIEW



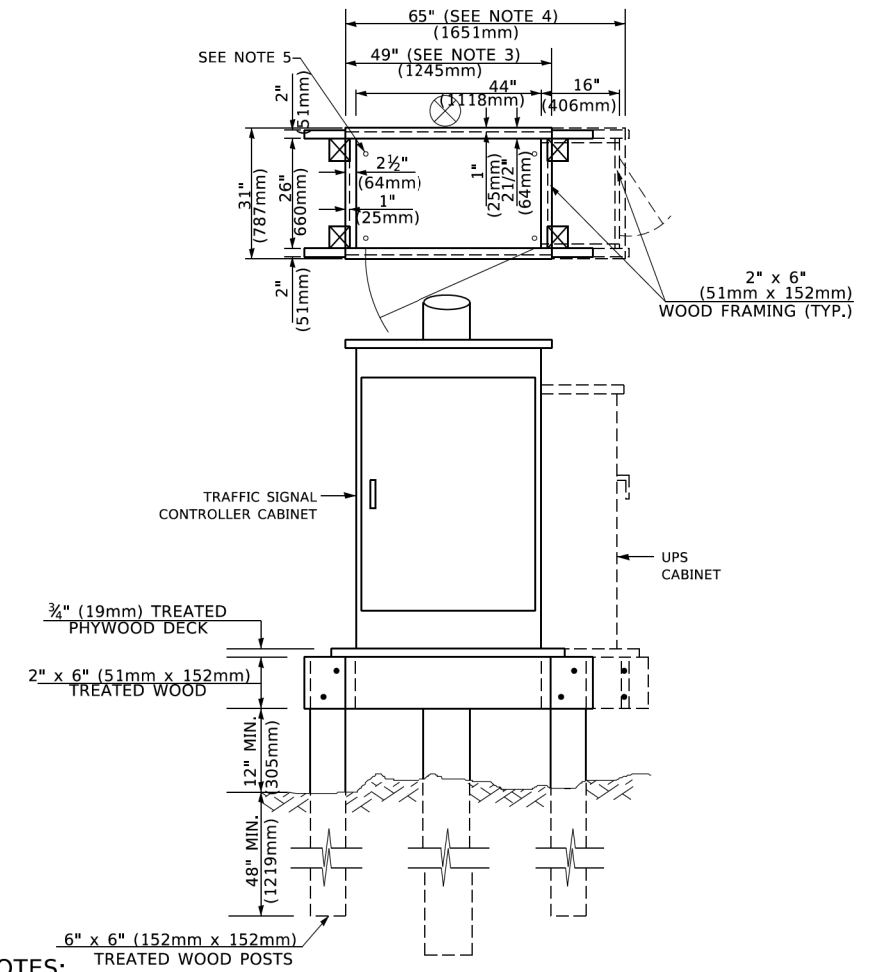
**TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET**



TOP VIEW



**TYPE C
FOR GROUND MOUNTED
SUPER P (TYPE IV) AND SUPER R (TYPE V)
CONTROLLER CABINETS**



NOTES:

1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION..

**TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM**

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

DEPTH OF FOUNDATION

MAST ARM LENGTH	① FOUNDATION DEPTH	FOUNDATION DIAMETER	SPIRAL DIAMETER	QUANTITY OF REBARS	SIZE OF REBARS
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 55' (16.8 m) and less than 65' (19.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 65' (19.8 m) and less than 75' (22.9 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average unconfined compressive strength (qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.
2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
4. For mast arm assemblies with dual arms refer to state standard 878001..

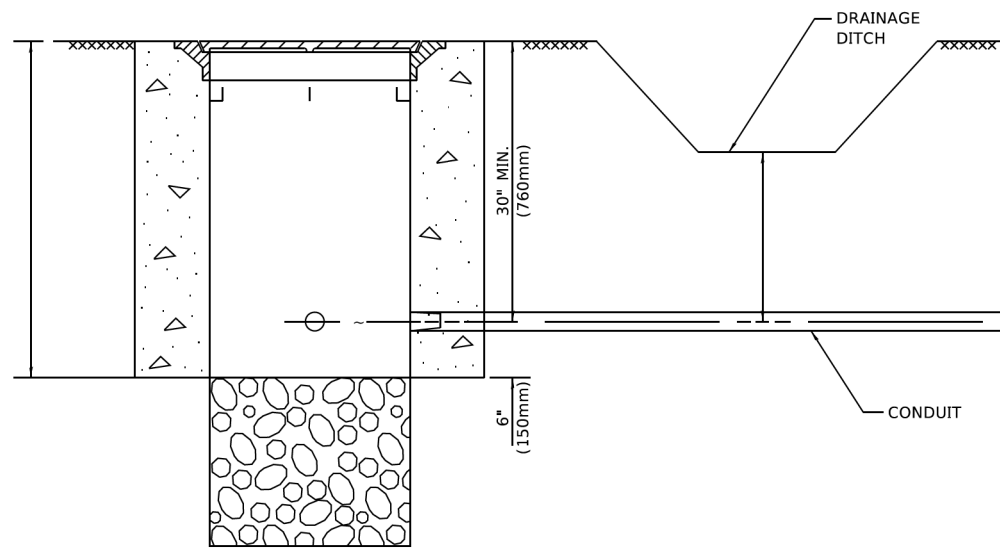
DEPTH OF MAST ARM FOUNDATIONS, TYPE E

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 70

FILE NAME = IDOT-StdDetails.dgn	USER NAME = zwallsten	DESIGNED -	REVISED -
5388.800	PLOT SCALE = 1:2	DRAWN -	REVISED -
IDOT D1 STANDARD TS05e	PLOT DATE = 8/20/2020	CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

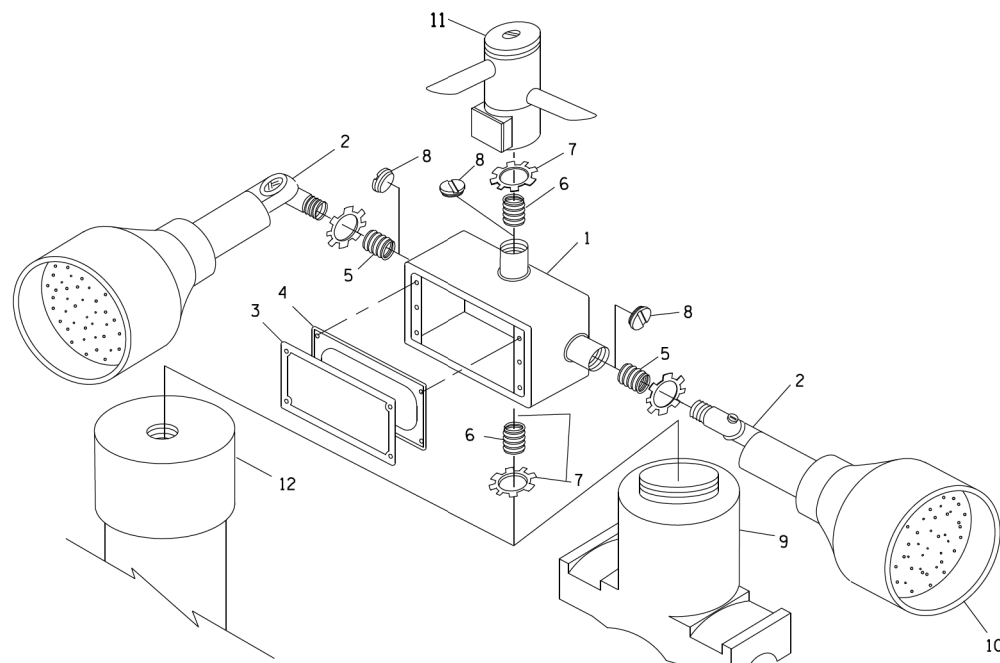
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STANDARD TRAFFIC SIGNAL DESIGN DETAILS		298		18-00517-00-TL	
		TS-05		WILL	
				TOTAL SHEETS 72	
				SHEET NO. 70	
				CONTRACT NO. 61G36	
				ILLINOIS FED. AID PROJECT	



NOTES:

1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY DUTY HANDHOLES AND DOUBLE HANDHOLES.

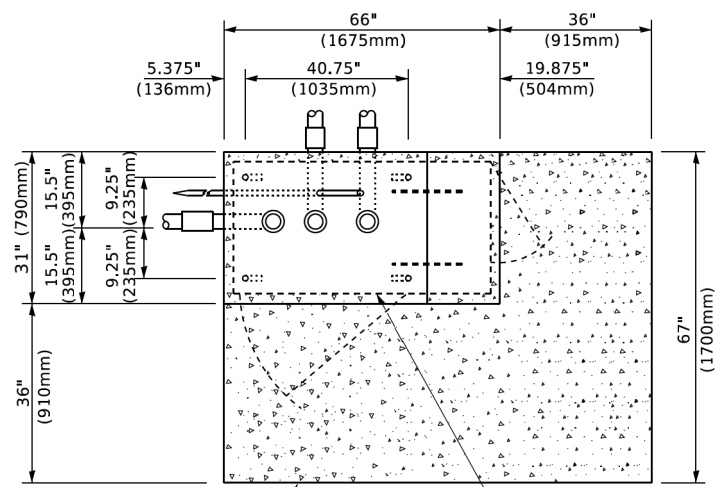
HANDHOLE WITH MINIMUM CONDUIT DEPTH
(NOT TO SCALE)



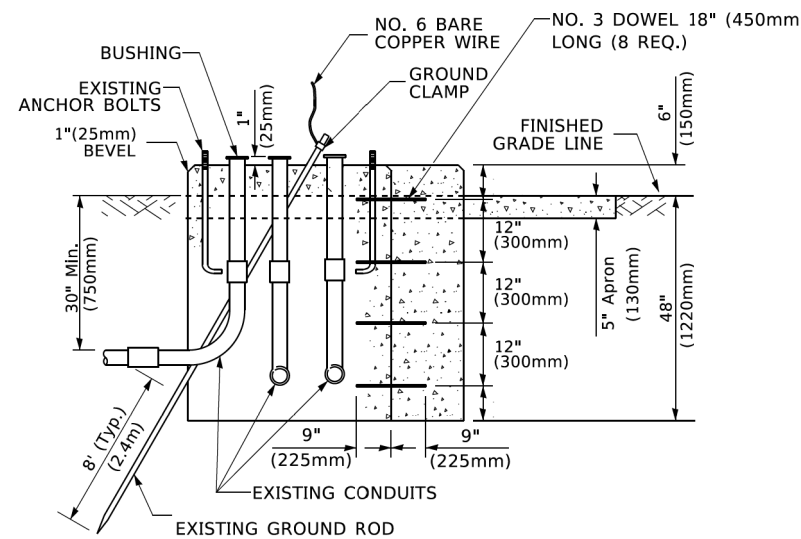
POST CAP MOUNT

MAST ARM MOUNT

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL



TOP VIEW
(NOT TO SCALE)

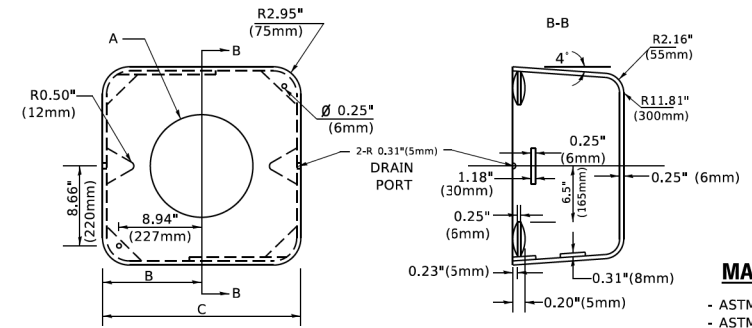


MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION
(NOT TO SCALE)

ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4" (19 mm) CLOSE NIPPLE
7	3/4" (19 mm) LOCKNUT
8	3/4" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

NOTES:

1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4 " (19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



MATERIAL
- ASTM A36 STEEL
- ASTM A-123 HOT DIPPED GALVANIZED

	A	B	C	HEIGHT	WEIGHT
VARIES	9.5"(241mm)	19"(483mm)	7" (178mm) - 12" (300mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIES	10.75"(273mm)	21.5"(546mm)	7" (178mm) - 12" (300mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIES	13.0"(330mm)	26"(660mm)	7" (178mm) - 12" (300mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES	18.5"(470mm)	37"(940mm)	7" (178mm) - 12" (300mm)	7" (178mm) - 12" (300mm)	126 lbs (57 kg)

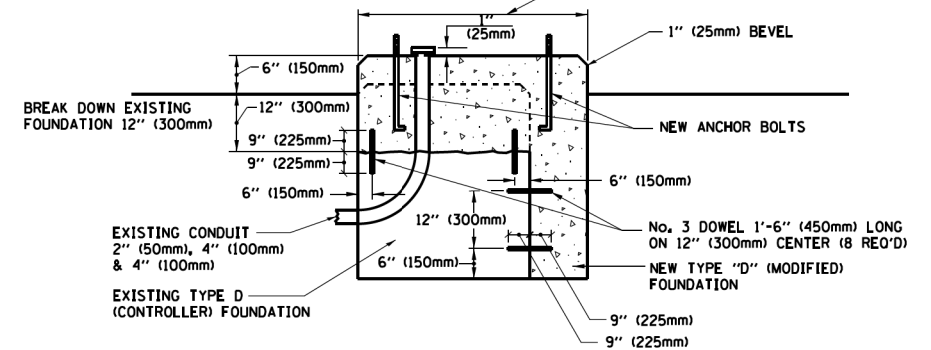
SHROUD

NOTES:

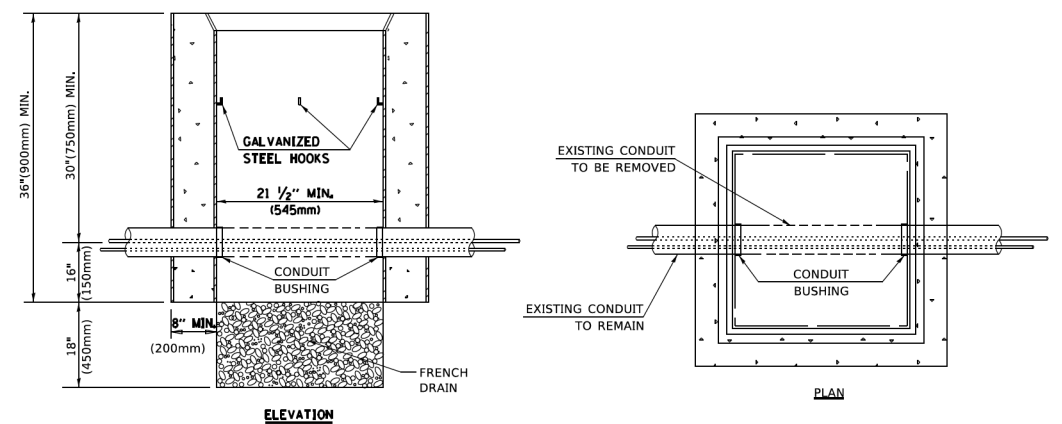
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

NOTE:

SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE "D" FOUNDATION



NOTES:

1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

HANDHOLE TO INTERCEPT EXISTING CONDUIT

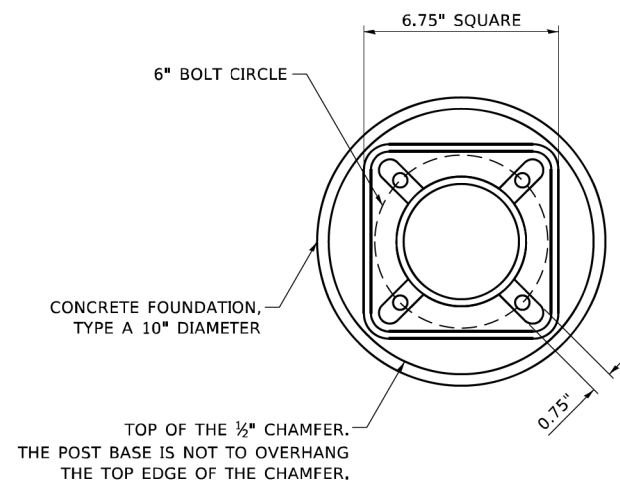
GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 71

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5388.800	PLOT SCALE = 1:2	CHECKED -	REVISED -
IDOT D1 STANDARD TS05F	PLOT DATE = 8/20/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

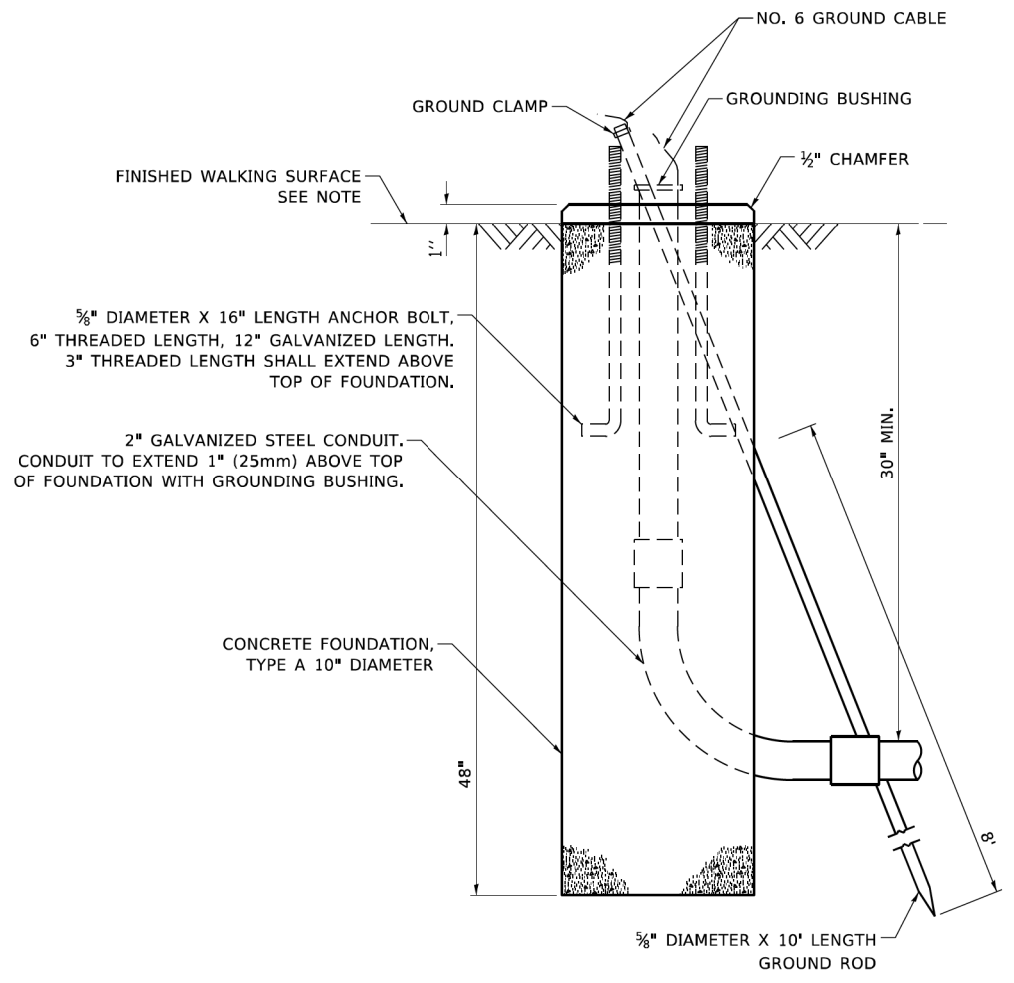
DISTRICT ONE			
STANDARD TRAFFIC SIGNAL DESIGN DETAILS			
SCALE: NONE	SHEET 6	OF 7 SHEETS	STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
298	18-00517-00-TL	WILL	72	71
TS-05		CONTRACT NO. 61G36		
ILLINOIS FED. AID PROJECT				

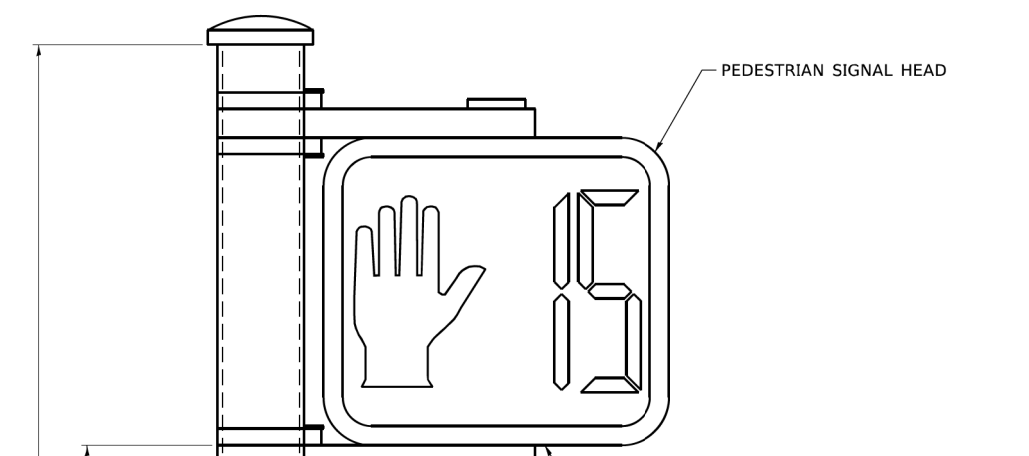


BOLT PATTERN

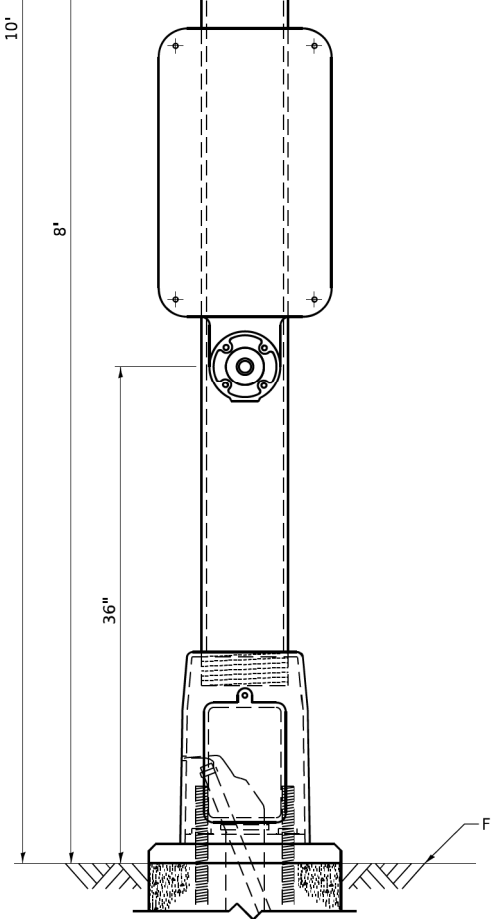
NOTE:
 1. IF THE PEDESTRIAN SIGNAL POST FOUNDATION IS INSTALLED WITHIN OR BEHIND A BARRIER CURB, THE TOP OF THE FOUNDATION SHALL BE INSTALLED FLUSH WITH THE TOP OF THE BARRIER CURB.



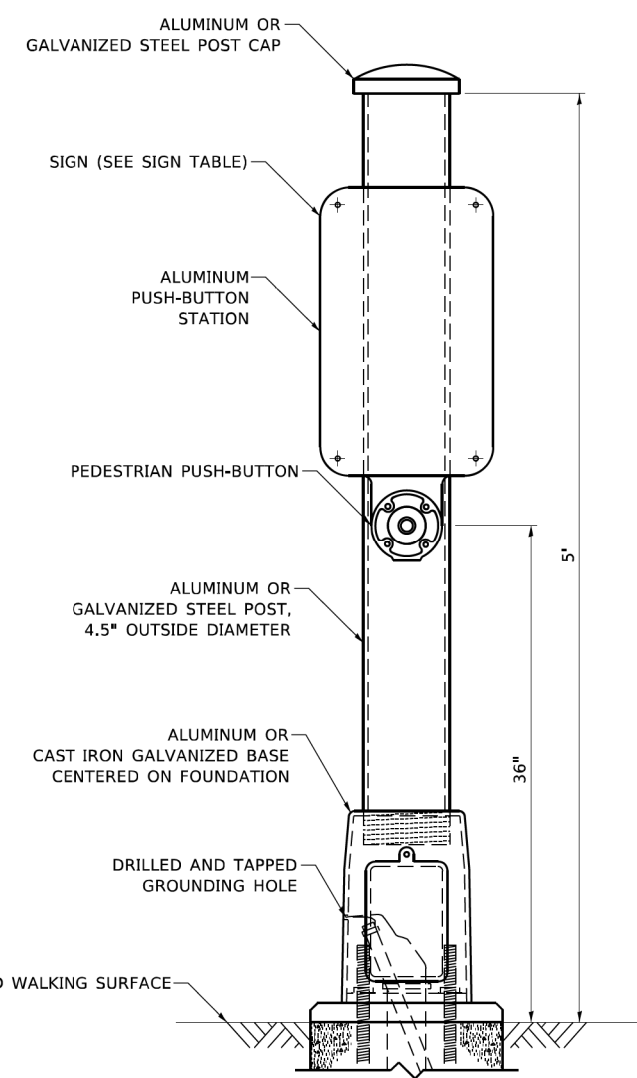
CONCRETE FOUNDATION, TYPE A 10-INCH DIAMETER



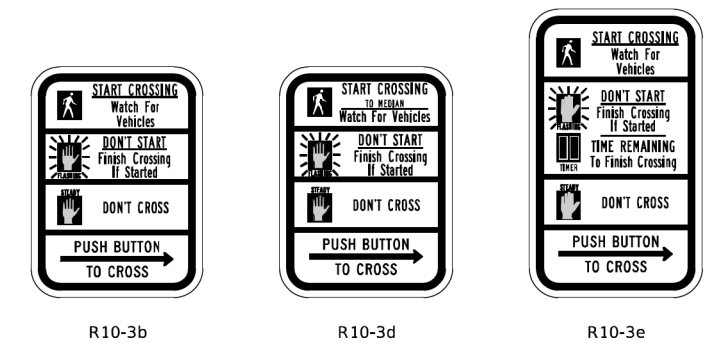
COUNTDOWN PEDESTRIAN SIGNAL HEADS ARE NOT TO BE USED AT RAILROAD INTERSECTIONS



PEDESTRIAN SIGNAL POST, 10 FT.



PEDESTRIAN SIGNAL POST, 5 FT.



SIGN TABLE

SIGN	DIMENSIONS
R10-3b (RAILROAD ONLY)	9" X 12"
R10-3d (RAILROAD ONLY)	9" X 12"
R10-3e	9" X 15"

NOTES:
 1. THE SIGN PANELS SHALL BE TYPE AP SHEETING.
 2. THE ARROW ON SIGNS FOR PUSH-BUTTONS SERVING TWO DIRECTIONS ON THE SAME PHASE SHALL BE BI-DIRECTIONAL.
 3. THE SIGN FOR DUAL-CALL PUSH-BUTTONS SHALL HAVE NO ARROW.

GHA GEWALT HAMILTON ASSOCIATES, INC. TS SHT NO. 72

FILE NAME = IDOT-StdDetails.dgn	USER NAME = zwallsten	DESIGNED - IP	REVISED - IP 1/8/2020
5388.800	PLOT SCALE = 1:2	DRAWN - IP	REVISED -
IDOT D1 STANDARD TS05g	PLOT DATE = 8/20/2020	CHECKED - LP	REVISED -
		DATE - 10/15/2018	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DISTRICT ONE			
STANDARD TRAFFIC SIGNAL DESIGN DETAILS			
SCALE: NONE	SHEET 7	OF 7 SHEETS	STA. TO STA.

F.A.U. RTE. 298	SECTION 18-00517-00-TL	COUNTY WILL	TOTAL SHEETS 72	SHEET NO. 72
TS-05		CONTRACT NO. 61G36		
ILLINOIS FED. AID PROJECT				